DOCUMENT RESUME

ED 198 341 CE 028 030

TITLE	Exploring Careers. Performing Arts, Design, and Communications Occupations. Communications Occupations.
INSTITUTION	Bureau of Labor Statistics (DOL), Washington, D.C.
REPORT NO	BLS-Bull-2001-14
PUB DATE	79
NOTE	51p.: Photographs will not reproduce well. For related documents see CE 028 017-031.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Architecture; Career Awareness; Career Choice; *Career Exploration; Communications; *Design; Educational Needs; Education Work Relationship; Employment Qualifications; Junior High Schools; Learning Activities; *Mass Media; Musicians; News Reporting; *Occupational Information; Resource Materials; Self Evaluation (Individuals); *Theater Arts; Work Attitudes

ABSTRACT

"Exploring Careers" is a career education resource program, published in fifteen separate booklets, for junior high school-age students. It provides information about the world of work and offers its readers a way of learning about themselves and relating that information to career choices. The publications aim to build career awareness by means of occupational narratives, evaluative questions, activities, and career games grouped in fourteen occupational clusters. This fourteenth of the series presents an overview of jobs in the fields of the performing arts, design, and communications. Narrative accounts focus on an architect, a newspaper reporter, and a street musician, describing what they do and how they prepared for their careers. Exploring sections relate skills needed for these occupations to students' personal characteristics, and learning activities such as art projects, model building, and entering talent shows are suggested. A Job Facts section lists nature and places of work, training and qualifications, and other information for nineteen occupations, grouped in occupational clusters of performing artists, design, and communications occupations. ("Exploring Careers" is also available in a single volume of fifteen chapters.) (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Exploring Careers

Performing Arts, Design, and Communications Occupations

U.S. Department of Labor
Ray Marshall, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
1979

Bulletin 2001-14

ED198341

CE 028 030

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Exploring Careers is available either as a single volume of 15 chapters or as separate chapters, as follows:

The World of Work and You
Industrial Production Occupations
Office Occupations
Service Occupations
Education Occupations
Sales Occupations
Construction Occupations
Transportation Occupations
Scientific and Technical Occupations
Mechanics and Repairers
Health Occupations
Social Scientists
Social Service Occupations
Performing Arts, Design, and Communications Occupations
Agriculture, Forestry, and Fishery Occupations

Photograph Credits

Photography for *Exploring Careers* was directed by Max L. Carey of the Bureau of Labor Statistics, Division of Occupational Outlook. Members of the Division's staff who assisted with obtaining and editing photographs were Anne Kahl, Kathy Wilson, Chester Curtis Levine, and Gloria D. Blue. Contributing photographers were Al Whitley of Whitley Associates, and Harrison E. Allen, Robert Donaldson, and Fleming P. Rose of the U.S. Department of Labor, Division of Graphic Services. The Bureau gratefully acknowledges the cooperation of the many government and private sources that either contributed photographs or made their facilities available to photographers. Depiction of company or trade names in no way constitutes endorsement by the Department of Labor. Some photographs may not be free of every possible safety or health hazard.

Government Sources

Federal. Armed Forces Radiobiology Institute; Board of Governors of the Federal Reserve System; Bureau of Prisons; Department of Agriculture; Department of Health, Education, and Welfare; Department of the Interior; Federal Aviation Administration; Government Printing Office; National Aeronautics and Space Administration; National Institute of Mental Health; National Park Service; Smithsonian Institution; Tennessee Valley Authority; and U.S. Postal Service.

State and local. City of San Antonio; City of San Diego; District of Columbia—Department of Human Resources, Police Department; Fairfax County (Va.)—Public Schools, Public Libraries; Maryland National Capital Park and Planning Commission; Montgomery County Public Schools (Md.); University of Texas Health Science Center at San Antonio; and Washington Metropolitan Area Transit Authority.

Private Sources

Individuals. Robert Devlin; Robert Miller; The Honorable Eligio de la Garza; The Honorable Henry B. Gonzalez; The Honorable Daniel K. Inouye; and David Weitzer.

Membership groups. Air Transportation Association of America; American Iron and Steel Institute; American Petroleum Institute; Associated General Contractors of America; Association of American Railroads; Chamber of Commerce of the U.S.A.; International Association of Machinists and Aerospace Workers; Motor Vehicle Manufacturers Association of the U.S., Inc.; National Education Association; and United Brotherhood of Carpenters and Joiners of America.

Industry and business. Allen-Mitchell and Co.; American Telephone and Telegraph Co.; Arlington Hobby Crafters; Babcock and Wilcox Co.; Badger America Inc.; The Big Cheese; Blake Construction Co.; Bob Peck Chevrolet; Carl T. Jones Associates; Chase Manhattan Bank; Chessie System; Cycles Inc.; Del Mercado Shell Service Center; Everhart Jewelers; General Truck Sales; The Hecht Co.; Hyatt Regency of Washington; Heritage Exxon Servicenter; International Business Machines Corp.; Mayflower Hotel, Merrill Lynch Pierce Fenner and Smith, Inc.; Navy Marshall and Gordon; Nike of Georgetown; Riggs National Bank; Southeast Auto Supply; State Farm Insurance Companies; Texaco Inc.; WGMS Broadcasting Co.; Westinghouse Electric Corp.; and Westvaco Corp.

Publications. Arlington News; Co-ed Magazine; Law Enforcement Communications; The New Prince George's Post, and *The Washington Post.*

Other. Alexandria Archaeology Research Center (Va.); American National Red Cross; Catholic Charities of the Archdiocese of Washington; Folger Shakespeare Library; Forsyth County Heart Association (N.C.); George Washington University Hospital; Model Cities Senior Center (D.C.); St. Columba's Episcopal Church (D.C.); St. Thomas Apostle Catholic Church (D.C.); United Way of America; Visiting Nurse Association of Washington, D.C.; and Washington Hospital Center (D.C.).

Preface

Exploring Careers is a career education resource for youngsters of junior high school age. It provides the kind of information about the world of work that young people need to prepare for a well-informed career choice. At the same time, it offers readers a way of learning more about themselves. The publication aims to build career awareness by means of occupational narratives, evaluative questions, activities, and career games presented in 14 occupational clusters. *Exploring Careers* emphasizes what people do on the job and how they feel about it and stresses the importance of "knowing yourself" when considering a career. It is designed for use in middle school/junior high classrooms, career resource centers, and youth programs run by community, religious, and business organizations.

This is 1 of 15 chapters. A list of all the chapter titles appears inside the front cover.

Exploring Careers was prepared in the Bureau's Division of Occupational Outlook under the supervision of Russell B. Flanders and Neal H. Rosenthal. Max L. Carey provided general direction. Anne Kahl supervised the planning and preparation of the publication. Members of the Division's staff who contributed sections were Lisa S. Dillich, David B. Herst, H. Philip Howard, Chester Curtis Levine, Thomas Nardone, Debra E. Rothstein, and Kathy Wilson. Gloria D. Blue, Brenda Marshall, and Beverly A. Williams assisted.

The Bureau gratefully acknowledges the cooperation of all the workers who agreed to be interviewed and photographed, the teachers and students who field tested a sample chapter, and all who shared their ideas with BLS. Many people in the counseling community offered encouragement and support. Special thanks for her generous assistance go to Cathy Cockrill, Career Education Curriculum Specialist, Fairfax County Public Schools, Fairfax, Virginia.

Although they are based on interviews with actual workers, the occupational narratives are largely fictitious.

Material in this publication other than photographs is in the public domain and may be reproduced without the permission of the Federal Government. Please credit the Bureau of Labor Statistics and cite *Expioring Careers,* Bulletin 2001.

Contents

	Page
Performing arts, design, and communications occupations	1
Architect	11
Newspaper reporter	18
Street musician	26
Job facts	33

Exploring Careers

Performing Arts, Design, and Communications Occupations

It takes creativity to dance in a manner that moves an audience.

"Bravo!" The applause was thunderous. The curtain opened once more and the performers took a final bow. As the curtains swung closed again, the auditorium lights came on.

Backstage, Sally and Betsy hugged each other in delight. Jake, Kevin, and John laughed and talked excitedly. They had good reason to be elated: The play had been a huge success.

"You were terrific!" John told Sally. "You really had the audience in the palm of your hand."

"I knew they were with me," Sally agreed. "I could feel their support. And they loved you too!"

Liz Swoyer, the drama teacher who had directed the play, rushed over to the students. "You were marvelous!" she said happily, embracing each one in turn.

"I guess we've learned the secret of success in performing," John said, looking over at Ms. Swoyer. "You have to win the audience over—get them on your side."

"Well, that's true," Ms. Swoyer agreed. "But it's easier said than done. Getting the audience to sympathize and identify with you takes talent and hard work. You know yourselves how much practice you had to put in to get your lines just right and learn the action too. Each of you spent weeks trying to become the character you portrayed."

"Right," responded Kevin emphatically. "After a while I felt as though I could say my lines in my sleep."

"Me too," joined in Betsy, "I became so familiar with the character I was playing that I thought I knew how she would react in any situation."

Ms. Swoyer smiled and continued, "Of course, you're all talented and creative; that's important."

"It certainly is," laughed Jake as he looked at John. "You were pretty creative when you forgot your lines in the second act and had to ad lib. That was quick thinking—I'm sure nobody noticed."

"That's right," Ms. Swoyer joined in. "That was creative. So were the gestures you all incorporated into your roles. Betsy, when you started crying in the last scene I saw tears in the eyes of several people in the first row. It takes a great deal of creativity to interpret drama, music, or dance in a manner that moves an audience."

Getting the audience to identify with you takes talent and hard work.

"You know," said Kevin, "I really was nervous before the show. I was sure my voice would crack, or I'd trip and fall, or my mind would go blank. I'm surprised at how quickly I lost my nervousness once I started saying my lines. I completely forgot my fears once the play began."

"You all handled yourselves very well," Ms. Swoyer said warmly. "Stage fright has ruined many a performance. Luckily, none of you seems to have a big problem with that. Stage presence is probably one of the most important qualities you need for success as a performer. As you probably know by now, stage presence is largely a matter of self-confidence. For some performers, it takes a long, long time to develop that self-confidence, and the jitters never really go away."

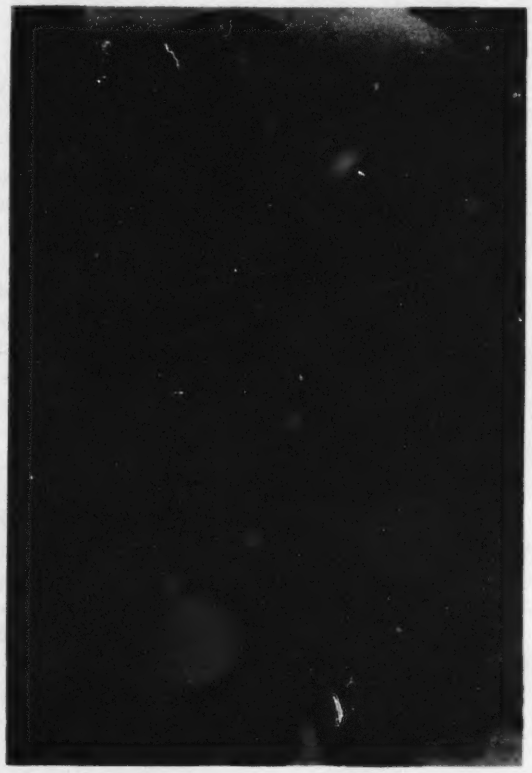
Jake spoke up. "Even though talent and creativity are very important, they're not enough to guarantee success. A good performance also requires practice and hard work. And even those aren't enough if the performers don't have that special magic called stage presence."

"You put that very well, Jake," replied Ms. Swoyer. "But if you're already considering a career as an actor on the basis of tonight's triumph, there's one more thing to remember. Success in the performing arts often is a matter of sheer luck. No matter how good you are, there's no guarantee of success."

"Well," said John, "I'm so happy with the way things went tonight that I don't really care about finding the key to success. We can worry about that when we start rehearsing our next production. After we take off our stage makeup, why don't we all go over to my house for some music and food?"

Performing Arts Occupations

John, Betsy, and the other students so happily enjoying their moment of glory are amateur performers. Whether amateurs at Middlesex Junior High or professionals on Broadway, people in the performing arts are involved in creating and communicating ideas and emotions. Through their art, they're trying to say something about what it's like to be alive. Sometimes the message is



A good performance also requires many hours of practice.

Stage presence is one of the most important qualities for success as a performer.

Performers communicate feelings and emotions.

All kinds of performers use their talents to entertain people.

thoughtful, serious, profound; other times, it's joyful, lighthearted, even silly. In any event, when performers share their talents with an audience, they express themselves in a highly creative and personal manner. Indeed, for people with the personality, the talent, and the drive, the performing arts offer outstanding opportunities for self-expression.

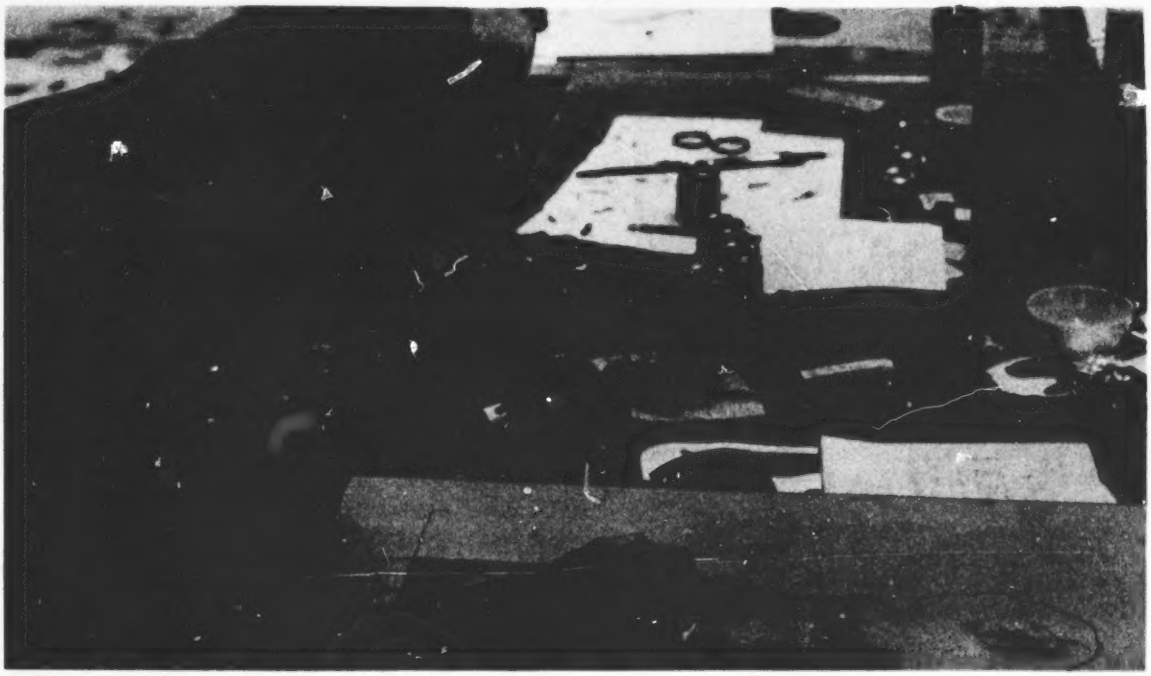
We've already met some *actors and actresses.* What other performers come to mind? *Musicians*, perhaps—jazz musicians, folk musicians, rock musicians, members of symphony orchestras or chamber music ensembles, solo guitarists, violinists, pianists, and organists. Then there are the *singers*—opera singers, folk singers, pop singers, country and western singers, choral singers. And *dancers*—tap dancers, modern dancers, ballet dancers, chorus dancers, nightclub dancers. *Comedians* tell jokes to amuse people. *Magicians* perform sleight-of-hand to amaze and delight their audiences. *Mimes* act out scenes or imitate objects or animals using gestures but no words. *Television* or *movie stunt people* substitute for regular actors in scenes that require daredevil feats. Circus performers such as *lion tamers, tightrope walkers,* and *trapeze artists* thrill their audiences with daring deeds. *Clowns* make people laugh. *Gymnasts* and *figure skaters* fill crowds with admiration at their grace and skill.

What does it take for a career in the performing arts? *Talent* is probably the most essential quality for a performer. Without talent, all the years of study and practice may be wasted.

The performing arts are different from other arts in that the performer is an essential part of the product that he or she produces. That's why *stage presence* and the ability to communicate with an audience are so important. Performers must like expressing themselves in front of an audience in order to develop an exciting give-and-take with all those people on the other side of the footlights.

Other traits are needed, too. *Ambition* and *persistence* are necessary for success in this highly competitive field. Performers usually have to audition before they are hired—they have to "sell themselves" to critical producers, directors, or conductors. They may be in a show that folds because of empty houses and unfavorable reviews. There are, in fact, hundreds of reasons why performers need a temperament that urges them to keep going in spite of failures, a spirit that drives them to try, try again.

As Ms. Swoyer reminded the students, there's no guarantee of success if you decide to try a career in the performing arts. There is little financial security, working



Artists spend countless hours mastering new techniques.

hours are odd, and there sometimes is so much travel that it's hard to put down roots in a community. Yet many performers find the desire to express themselves so important that they take part-time jobs in other fields in order to earn enough money to live.

Design Occupations

People in design occupations use visual means to convey ideas and emotions. They use their hands as well as their minds to create things. Some create objects whose sole purpose is to be appreciated for their beauty. Others design objects that are meant to serve a useful purpose; the designer's aim is to make these objects attractive as well as useful. Let's explore some of the design occupations.

The works of art you see as you wander through a museum or an art gallery are examples of objects produced by people called "fine artists." The fine arts are concerned with beauty for its own sake. People who devote their lives to creating works of fine art include *painters* who paint landscapes, portraits, scenes of daily life, or abstract works. The fine arts also include the works of *sculptors*, who carve or model objects out of

This Pueblo artist uses traditional designs in his work.

Designing the layout of a book calls for a sense of balance and proportion.

clay, stone, metal, wood, and other materials, and the works of *printmakers*, who transfer images to paper, canvas, or cloth to reproduce a design they have already created.

Not many people are able to make a living solely in the fine arts. Many with an artistic flair work at jobs that have a more regular income, putting their talents to use designing the products we use every day and making our surroundings pleasant to look at. An *architect*, for example, designs the buildings you see around you. A *commercial artist* creates the artwork in the newspapers and magazines you read, on the packages and containers you pick up, and on the billboards or television commercials you see. A *display worker* designs and installs the displays in stores and store windows that attract you and other customers and encourage you to buy. A *floral designer* arranges flowers and greenery into the corsage or boutonniere you wear to a school dance. An *industrial designer* designs typewriters, telephone receivers, and other everyday industrial products—trying to make them as useful and attractive as possible. An *interior designer* decides what colors to use in a new office, how to arrange the space, and what furniture to buy. A *landscape architect* designs the lawns and shrubbery for a golf course or public garden. A *photographer* takes pictures of people, places, and things to convey an idea or tell a story.

These industrial designers are working on a full size model of a new car.

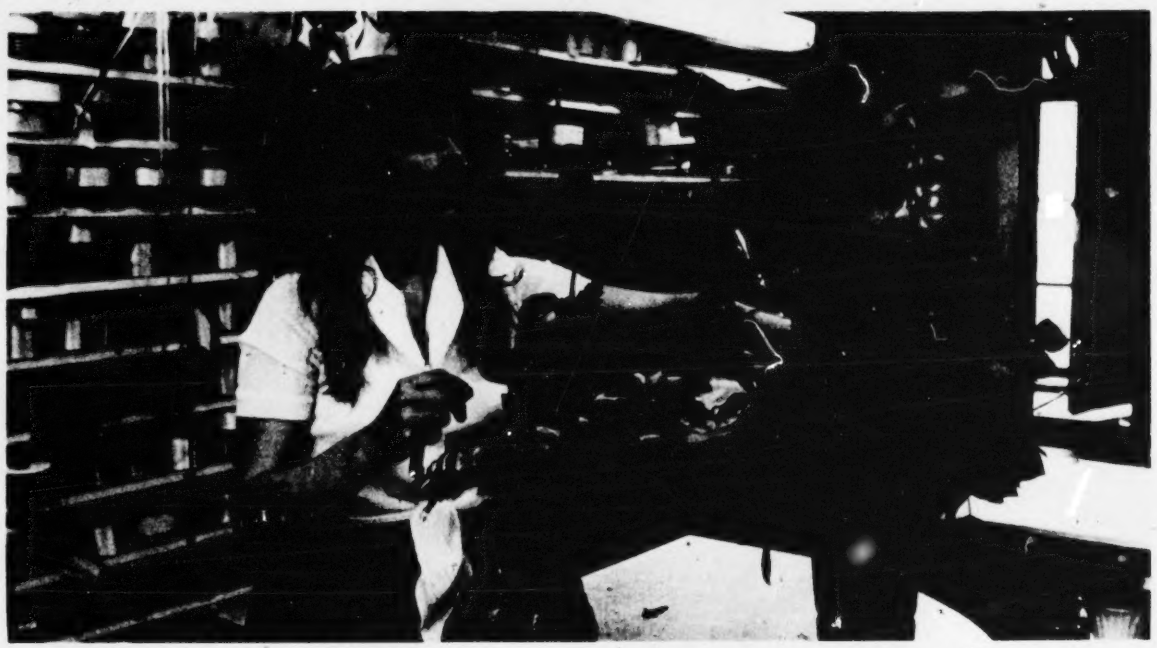
The ability to work on your own is important for people in the design field.

Exhibit designers set up displays in museums, art galleries, and exhibitions; they figure out what objects to display and how to show them most effectively. *Costume designers* plan performers' wardrobes for theatrical productions, operas, ballets, movies, and television shows. *Clothing designers* develop ideas and patterns for the clothing we wear—everything from jackets to jeans. *Furniture designers* make sketches of new designs for the furniture in our homes, schools, and public buildings.

What does it take for a design career? *Artistic talent* is crucial. People in this field need a strong color sense, an eye for detail, and a sense of balance and proportion. An aesthetic sense, or *sensitivity to beauty*, is essential, since people in design must be aware of what is artistically good and what is not before they can produce works that are appealing to others.

Styles and tastes in art and fashion change with almost breathtaking speed, and people who work in this field need to be able to keep up. Much of the challenge of a design career lies in the opportunity to rely on your own creativity, to trust your own artistic instincts—all the while remaining open to new ideas and methods. Creativity does not always mean thinking up completely new ideas. Rather, creative expression may involve picking and choosing from ideas around you, and then bringing

A photographer must know what will make a good picture.



Floral design is taught in trade schools and community colleges.

English courses helped this woman prepare for her edit rial job.

everything together to form something quite new. *Flexibility*, the ability to adjust to change, is important.

The persistence that comes from a *belief in your own artistic vision* is, at the same time, an important trait for someone in the design field. Creative work can be frustrating, even discouraging, during periods when new ideas don't come—or when your ideas clash with those of a client. There will be times when you'll have to change a concept or layout to accommodate your client. Handling this sort of situation requires flexibility, of course, and the ability to "sell" your ideas to other people. But it also takes a sure sense of your own artistic integrity. Only with a belief in your own ideas will you know when to change a design—and when not to.

Problem-solving ability is sometimes quite important, too, for often it is the designer's job to come up with a solution to a client's design problem that is both aesthetic and practical.

Self-discipline, motivation, the ability to work independently—all are important traits for people in the design field. These workers must be willing to assume responsibility for the final product. And since they often work on tight deadlines, they need the initiative to start projects on their own, to budget their time, and to complete everything as scheduled.

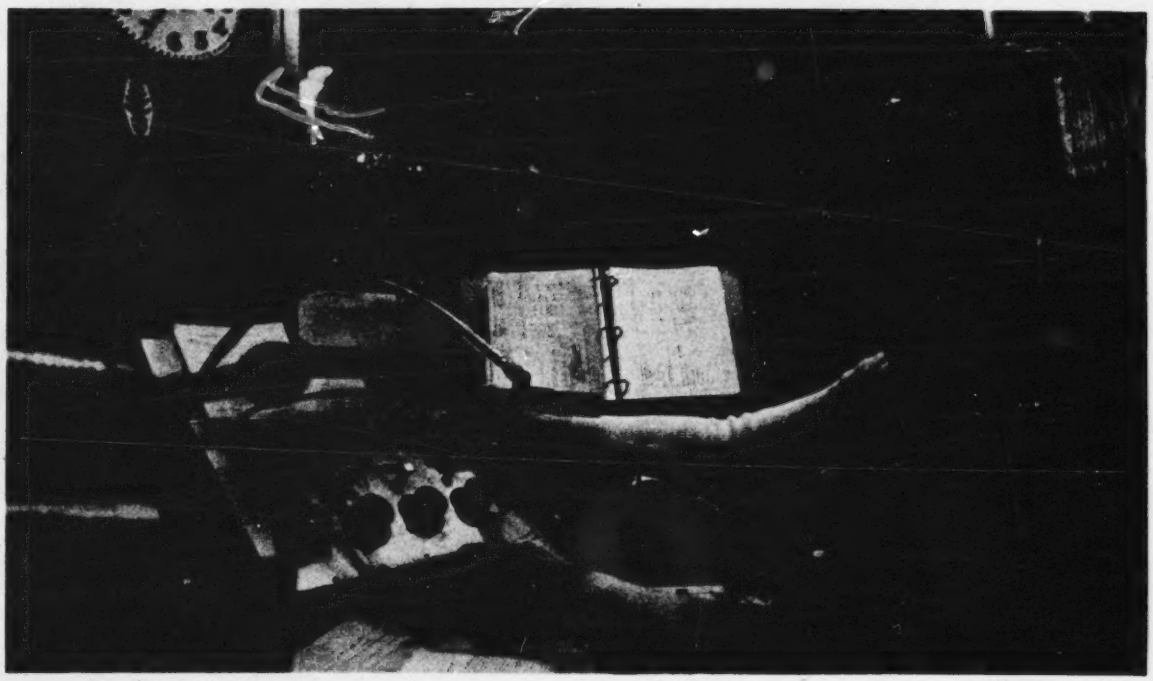
A feeling for language enables a writer to breathe life and meaning into the ordinary happenings of everyday life.

Communications Occupations

People in communications occupations deal with mental images created by words. For these workers, language is a "tool of the trade." They use the written or spoken word to inform, persuade, or entertain others and they need to be able to express themselves clearly, accurately, and in an interesting manner. Some talented people use language to express their ideas and emotions in a highly creative fashion. A *poet*, for example, captures a feeling or an event through words much as a photographer uses film. You probably are familiar with *novelists, playwrights, essayists,* and *short story writers* from your English classes.

There are many other kinds of writers, too. *Reporters* gather information on current events and use it to write stories for publication in newspapers and magazines and for broadcast. *Advertising copywriters* write the text, or "copy", for advertisements that appear in newspapers and magazines, or on radio or television. *Educational writers* write textbooks and scripts for filmstrips. *Technical writers* write service manuals, catalogs, and instructions for users of all kinds of machinery and equipment—from dishwashers to missile launching systems. *Political speechwriters* write the speeches that are given by public officials and candidates running for political office. *Joke writers* write the jokes and gags told by comedians and the skits acted out in situation comedies on television. *Script writers* write original scripts for movies and television shows, or rework books or short stories into suitable scripts. *Business and financial writers* write newspaper columns and magazine articles on economic issues. *Medical writers* write for newsletters, scientific journals, and professional and trade publications on topics in medicine and health care. *Editors* revise and coordinate the work of other writers.

People in some communications occupations do relatively little writing. *Proofreaders* read and correct copy that others have written. *Literary agents* read and appraise clients' manuscripts, and then market them to editors, publishers, and others. *Radio and television announcers* comment on music, news, weather, and sports and sometimes deliver commercials. *Interpreters* help people overcome language barriers by translating what is being said in one language into a language that the listener can understand. *Translators*, who also work with foreign languages, prepare written translations of material in another language. Many translators specialize in a particular subject, such as poetry, chemistry, medicine, or politics.



Radio announcers often have to ad lib.

What does it take for a communications career? People in the communications occupations need an excellent *command of language*. It is through the right choice of words or phrases that interpreters and translators, for example, succeed in expressing the thought behind the factual information they convey. A feeling for language enables a poet or short story writer to breathe life and meaning into the ordinary happenings of everyday life.

Self-discipline is important in these occupations, where so many people face deadlines. Getting an article or report written by a certain date is almost entirely the author's responsibility. *Persistence* is important, too. The first effort of almost every writer—even those whose books are best-sellers—can be terrible. Professional writers can't let themselves be discouraged by this—they continue to "polish" the piece by revising, reorganizing, and rewriting it. If necessary, they tear it up and start all over.

For people in many communications occupations, acute *powers of observation* and the *ability to think clearly and logically* are necessary traits. A broadcast journalist covering a turbulent political convention, for example, needs a probing, analytical mind to discern shifting patterns of support for contending candidates and come up with a good story.

Newspaper reporters need insatiable curiosity to get all the details for a story.

Training

People in performing arts, design, or communications occupations often put in years of practice and hard work before they achieve a reputation for excellence. But they had to start out somewhere. Let's take a look now at the training needed to launch a career in one of these fields. More detailed information is given in the Job Facts at the end of this chapter.

The performing arts are noteworthy for the absence of formal educational requirements. What counts is ability or talent, not the schooling you have had. Of course, talent has to be developed through practice and guidance from skilled artists, and lessons can be quite important. Many ballet dancers, for example, begin taking lessons at the age of 7 or 8, and professional ballet dancers continue practicing for hours each day throughout their careers.

There are different ways of preparing for a career in music, drama, or dance. Many colleges and universities offer degrees in these fields, as do music and drama conservatories and schools of dance. And of course you can take private lessons with an accomplished artist. Experience in amateur productions is very important for developing one's innate talent and stage presence. Previous performing experiences can also serve as valuable credentials which may help in landing other performance work.

The design occupations vary greatly in training requirements. On-the-job training is sufficient for some jobs. Many design occupations, however, require a least a bachelor's degree. For other design careers, a combination of formal training and practical experience is the best preparation. Bear in mind that artistic ability is the basic requirement for all design careers.

How much schooling do you need to start out in the communications field? You will find that a high school diploma is essential. Beyond that, the amount of formal education you need depends on the type of work you do. The basic requirement for all these occupations is an exceptional command of the English language. You need to be able to speak and write fluently, imaginatively, and gramatically. Community and junior colleges and 4-year colleges and universities offer programs in English, journalism, creative writing, languages, linguistics, or communications. Many universities offer advanced degrees in these subjects. Practical experience working for a school or community newspaper, or for a radio or television station, is a good background for a career in this field.

Architect

Jack Myers says, "The best part of being an architect is seeing my ideas turn into buildings that are real."

Jack Myers takes out his key as he approaches the door with "J. Myers, Architect" stencilled in neat black letters. Unlocking the door and turning on the lights in one swift motion, he hurries into the attractive office. It is a large, cheerful room, full of light and color. But Jack is in a hurry this morning; he scarcely notices. Hanging baskets overflowing with plants fill the windows. The bright orange sofa where clients usually sit looks inviting. Across the room is Jack's desk, a broad expanse of white formica. On the walls are photographs and architectural drawings, all carefully matted and framed.

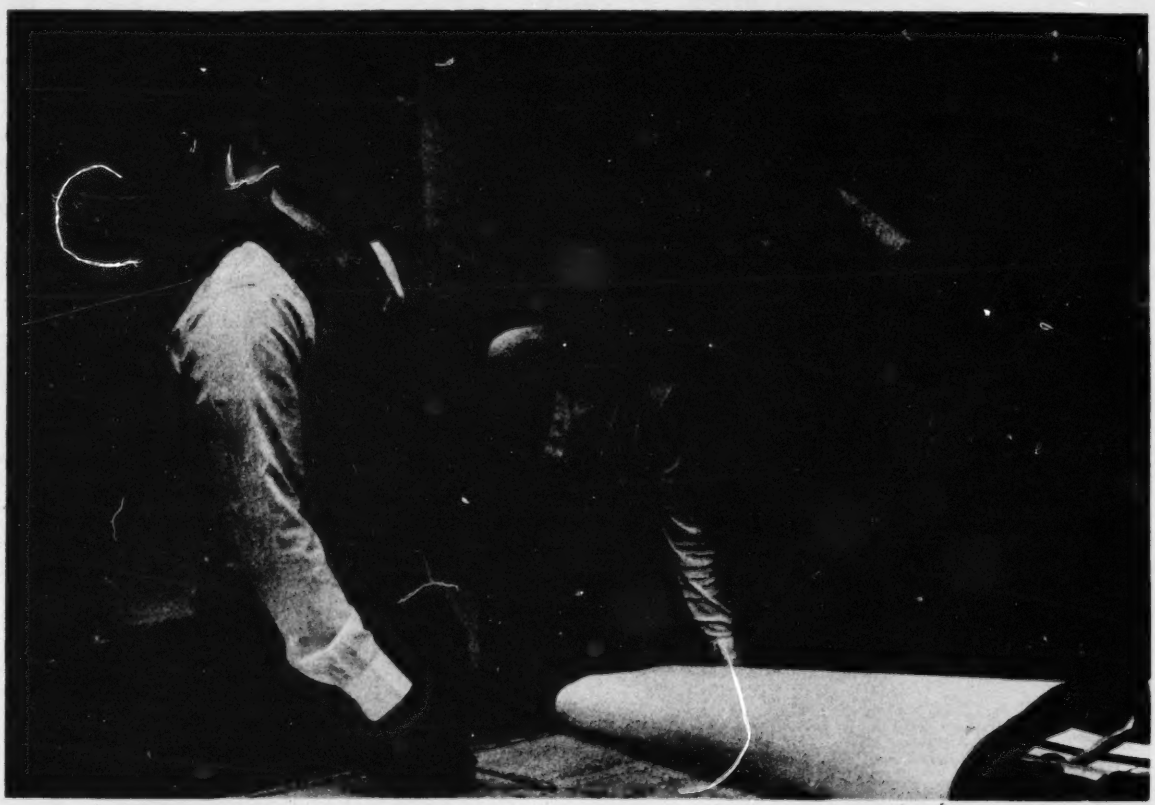
Jack notices none of this. He heads for a table in the corner, picks up some floor plans from the pile of papers and drawings there, and then settles down at his drafting table. Adjusting the lamp clamped to the top of the table, he twists in his seat to get a look at the clock: 6:45 a.m. "Three hours of drawing time before I have to take care of other things," he thinks as he bends over and begins to work.

Jack has been coming in to the office very early ever since he opened his own business about 2 years ago. That had been a big step, one he had taken only after gaining experience working with other architects in a large firm. Jack had gone to work for Jarvis Associates right after completing the 5-year college program that led to a bachelor's degree in architecture.

At Jarvis, Jack had started out with simple tasks such as tracing details from a book of standard architectural forms onto otherwise completed plans. Sometimes he would put dimensions or other notations on plans.

Later he advanced to drafting. He did the "working drawings" that the builder followed in constructing the building. Drafting was enjoyable and taught him a lot, but Jack knew almost from the start that he wouldn't be completely satisfied until he could design an entire building from start to finish. He stayed with Jarvis for about 6 years before deciding to open his own firm.

Now, because he hasn't been in business for himself long enough to develop a large clientele, he operates his office alone. That means long hours almost every day, because Jack does all of the office work as well as the architectural design and drafting. He goes to the post



An architect has to understand what clients want.

office to mail finished plans to clients, answers the telephone, makes appointments with clients, and sends out the bills. He's working much harder now than he did when he was with Jarvis Associates. But he doesn't expect to work such long hours forever! He knows that the more projects he designs, the more people will hear about him and see his work. And that, after all, is the way architects create names for themselves . . . and build up a clientele.

The plans Jack has just spread out on his drafting table are for a new home he's designing for Neal and Ellen Wright. "I've gotten to know the Wrights quite well," thinks Jack as he picks up an adjustable triangle. Knowing the client is an important part of the architect's job, for it's up to the architect to understand how a client wants to use the space that's being designed. It's the architect who translates the client's needs into something real and practical—as real and practical as a kitchen with lowered counter tops and appliances for a wheelchair user.

In fact, it's hard to believe it's been only 6 months since that first phone call, when Ellen had asked whether J. Myers, Architect, would be interested in designing the new house she and her husband were about to build. A friend had recommended Jack, she explained. Jack depends on recommendations like that from former clients to bring in new assignments; that's why it's so important that his clients be pleased with his work.

At their first meeting, in Jack's office, the Wrights had explained what kind of house they were interested in and had told him how much money they were prepared to spend. Jack had known right away that he wanted to design the Wright house. It was bound to be an interesting and worthwhile project.

After signing a contract with the couple, Jack had gone to the zoning commission office to make sure that such a project was in accordance with zoning regulations for the area where the Wrights owned land.

Later, Jack had spent some time with the entire family in order to learn how they lived—and how they wanted to use the space he was designing for them. He had asked questions about how and where they spent their time at home. He had asked about their hobbies, and had learned that Ellen had a "green thumb". She was delighted when Jack said it would be fairly easy to put in a greenhouse for her. The Wrights had definite ideas about some things. Mr. Wright wanted high ceilings, so that the house would seem as spacious as possible. Lee, their 10-year-old daughter, wanted lots of windows, especially in her bedroom. In addition to indoor growing space for plants, Mrs. Wright wanted a library or reading room. And she insisted on lots of closet space. Dani, the 8-year-old, wanted a game room for the ping-pong table the family was planning to get. Jack took notes throughout the session.

Feeling that he understood the Wrights' preferences and needs, Jack had turned to the next step—drawing up preliminary floor plans. The Wrights were excited with the plans when Jack brought them over for their approval. Like all clients, they had suggested some changes, so Jack had gone back to the drawing board. That had been almost 5 months ago.

Since then, while Jack has been drawing up more detailed plans, there have been even more changes for him to bring into his design. The Wrights, just like his other clients, seem to change their minds every week.

Being able to get along with clients is important in Jack's job. He has to treat his clients with tact and respect and consider their needs and desires. At the same time, he must gain *their* trust and respect so that they will value his opinions and suggestions and have faith in his work.

The plans on Jack's drafting table include several site plans, which show from different viewpoints how the Wright house will fit on the property. There also are floor plans, which show the layout of the rooms in the house and include such details as the sizes of the doors, the thickness of the windows, and the width of the stairways. Jack has still other kinds of plans to draw. Plans called "sections" show different vertical slices of the house and illustrate such things as insulation in the walls and roof. And he must also prepare plans that show the plumbing and electrical systems with their coded markings. On these plans, Jack will indicate where to put all the plumbing fixtures and pipes, as well as the electrical wiring system, outlets, and light fixtures. Jack is proud of the neatness and accuracy of the plans he draws.

Drawing up building plans takes more than neatness and accuracy, though. It requires a sense of beauty and harmony so that the buildings are pleasing to look at and fit in naturally with the environment. It means knowing mathematics in order to make correct measurements for the builders to follow. It means knowing a great deal about building materials, since it's the architect's job to indicate which materials will be used. It means some knowledge of structural engineering concepts—in order to know how much weight a foundation can hold, for example. And drawing skills are essential!

Jack is eager to get the revised plans to the Wrights for their approval this week so that he can get in touch with some contractors and open bidding for the project. Contractors supply the materials and skilled workers needed to construct a building. Contractors such as plumbing and electrical contractors, painters, carpenters, and bricklayers handle different phases of the job. The

contractors figure out how much time, labor, and materials will be involved, and then make their cost estimate. They do this carefully, knowing that they'll have to stick to the agreed-on estimate if they get the job. Usually Jack acts as general contractor himself, coordinating the work of all the other contractors. He generally tries to get more than one estimate of cost for each construction job in order to be sure that he gets a good price.

The sound of a fire engine racing down the street breaks Jack's concentration. He looks at his watch: 9:40 a.m. "Time passes so quickly when you're absorbed in your work," he thinks. Twenty minutes later, the last changes have been made on the Wright plans. Jack rolls up the plans, fastens them with a rubber band, and wraps them in brown paper. "If I hurry over to the Post Office now, these plans should get to the Wrights before the end of the week," he thinks as he goes to the closet to get his jacket.

Just then, the telephone rings. "J. Myers, Architect," says Jack. The voice at the other end of the line identifies itself as Arthur Sullivan.

"I'm interested in renovating some rowhouses. They're about 50 years old, and could use some changes in the plumbing and electrical systems. I guess they need general modernizing, and I'd like to see some of them enlarged if possible. A friend of mine told me you're the right architect for the job."

The prospect of a renovation job appeals to Jack. In fact, when he first started out on his own, he did practically nothing else. In some ways Jack finds renovation work even more challenging than designing a new building from scratch, because renovation so often involves dealing with the unknown—unknown building materials and construction techniques, to start with. And there's the satisfaction of finding solutions to structural and design problems. How do you create more space, or more light, without tearing down the whole building and starting all over again?

Jack agrees to meet Mr. Sullivan the next afternoon to look at the rowhouses and discuss the type of work that should be done and the cost involved.

After stopping at the Post Office to mail the Wright plans, Jack drives across town to the site of a garden apartment complex he has designed. Construction is supposed to be completed by September 1, and Jack tries to visit the construction site at least two or three times a week to see how things are going. With so many people handling different parts of the job, problems seem to crop up frequently. Just last week the glass supplier had cut the window glass to the wrong size. Every delay creates a problem for Jack, whose responsibility it is to make sure the apartments are completed on time.

Today things seem to be running smoothly. Jack catches sight of the contractor and walks over to him.

"Hi, Lou," says Jack. "How are things going today?"

"Everything's running like clockwork. If things continue at this pace we'll have these apartments completed next month."

"That's a relief," Jack thinks to himself as he goes inside one of the buildings to see what progress has been made since his last visit. After asking the contractor a few questions about touch-up work that needs to be done, he walks outside for another look at the exterior of the building.

Looking up at the six buildings that make up the complex, Jack feels a surge of pride and satisfaction. "The best part of being an architect," he thinks to himself, "is seeing my ideas take shape in brick and glass and steel."

Jack decides he has just enough time to look inside some of the other apartment buildings before lunch. Afterwards, he'll head back to his office to spend the rest of the afternoon drawing—this time, working on the plans for a small library. He turns with a quick step and heads for the next apartment building.

Jack knows many building contractors. "I shop around to see who will give me the best price on a job."

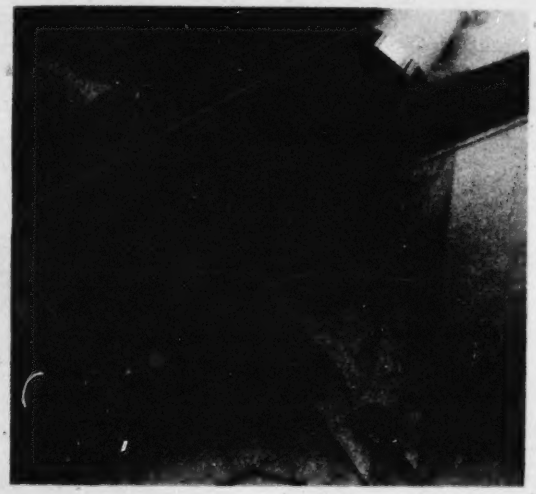
Exploring

Architects are concerned with the relationship between people and their environment. They must have an aesthetic sense as well as a practical understanding of people's needs.

- Do you notice your surroundings?
- Can you name some of the things that make your neighborhood or community pleasant to look at? Can you name things that make it unpleasant or even ugly?
- Do you notice different styles of architecture?
- Do buildings that are aesthetically pleasing or displeasing make a strong impression on you?
- Have you ever thought about the design of your school? Is it attractive? Is it functional? Can you explain why? Are the design and layout of your school similar or dissimilar to those of other schools in your community?

Architects use drawings and sketches to express their ideas. They must sketch quickly, neatly, and accurately.

- Do you like to draw?
- Do you draw landscapes? Portraits?
- Do you draw illustrations or cartoons for the school newspaper?



"Time passes quickly when I'm absorbed in my work."

- Do you like to draw posters for school and community events?
- Do you draw signs and illustrations for exhibit areas in your school?
- Is the written work for your school projects neat and accurate?
- Is your homework easy to read?
- Is your handwriting neat?

Architects have to understand how things are put together.

- Do you like to take things apart just to see how they are put together?
- Do you take apart radios, clocks, toys, household appliances, or engines?
- Are you good at doing jigsaw puzzles, crossword puzzles, mathematical puzzles, or brain teasers?
- Do you enjoy putting things together by following diagrams or written instructions?
- Do you like to sew clothes, build models, or assemble radios from kits?

Architects are responsible for many of the details involved in putting up a building. They must be good at organizing work and getting along with people.

- Are you a good leader? Do other people go along with your ideas when you're in charge of a group? Do they follow your suggestions?
- Do you enjoy working with other people on class projects?
- Do you like working with others on school clubs or committees?
- Do you enjoy organizing trips, parties, sports events, picnics, and dances?
- Do you like to coordinate cookie sales, calendar sales, car washes, greeting card sales, or other fund-raising projects?

Architects must meet deadlines. They often work under pressure, so they must be self-motivated and good at working independently.

- Are you able to stick to schedules? Do you usually get your school assignments in on time?
- Can you sacrifice leisure activities such as a movie or a baseball game when you have school work to be done?
- Do you take pride in completing projects by yourself?

Suggested Activities

Ask your teacher to arrange an architectural tour of a historic landmark in your State. There are historic landmarks in every State: Colonial communities in the East, plantations in the South, the French sector in New Orleans, Spanish missions in the Southwest, Indian and pioneer settlements in the West. In addition, almost all State capitals have buildings of historical importance, as do many older college campuses. Contact your State Historical Society, State Travel Commission, or local Chamber of Commerce for more information about historic landmarks near you.

As a project for a social studies or art class, conduct an architectural tour of a distinctive neighborhood in your community. The area you select for your tour might be the neighborhood where you live or go to school; a historic section; a riverfront or lakefront area; or the newest part of your community.

Identify several buildings in the area you select. Write one paragraph about each of these buildings, giving the street address, approximate year of construction, and interesting historical and/or architectural details. For help with your research, try the public library, a historical society, the planning department of your local government, and local architects. Prepare a drawing that includes the major buildings in your tour.

As a project for a social studies or art class, choose an interesting building in your community. Learn its history. When was it built? Have there been any additions or changes since it was built? Draw exterior views of the building. Construct a small cardboard model of it.

As a project for an art class, design your "dream house" or design a large project such as an airport or shopping center.

Ask your teacher to arrange a class visit to a construction site.

Design and build a doghouse, birdhouse, or playhouse.

Invite an architect to speak to your class about his or her job. Ask the speaker to bring some plans or drawings and explain them to the class.

Take the dimensions of your classroom as a project for a mathematics class. Then draw the room to scale, letting ½ inch equal 1 foot. Include all permanent objects in your plan, including windows, door, and radiators. Translate the measurements into metric units.

As a project for an art class, prepare a landscape design. Show the location of the lawn, bushes and shrubs, walkways, trees, flower gardens, rock gardens, ponds, benches, gazebos, and any other features you decide to include.

Invite a local building inspector to class to explain what inspectors look for when inspecting new residential buildings for approval of construction. Ask the speaker to bring copies of any forms he or she uses on the job.

Invent a new kind of structure as a project for an art or mathematics class. You might use unusual concepts such as domes, treehouses, or tents. You might use unusual shapes such as pyramids, cones, or spheres. Or you might use unusual materials such as plastic, thatch, or cardboard.

Join an Architecture Explorer Post, if there is one in your area. Exploring is open to young men and women aged 14 through 20. To find out abut Explorer Posts in your area, call "Boy Scouts of America" listed in your phone book, and ask for the "Exploring Division."

If you are a Boy Scout, try for Drafting, Landscape Architecture, Surveying, and Model Design and Building merit badges.

If you are a Girl Scout, see if your local troop has the From Dreams to Reality program for exploring careers. Troops may also offer opportunities to try out careers through internships and service aide and community action projects.

As a project for a science fair, design an environment for non-humans. You might want to design a "habitat" for animals in a zoo, or something as fantastic as a shopping mall for beings from Venus. If you decide to design something for beings from another planet, remember to describe them first. For example, the Venusian shopper might breathe water, see through a hole in the top of his or her head, or move by bouncing off walls.

Architects use mathematics in their jobs every day. Try your hand at the following simple examples of ways in which an architect uses mathematics:

- An architect is planning a house for a couple who do not want to spend more than $70,000. Building costs in the area are $35 per square foot. What is the largest house (in square feet) that the couple can afford?

- An architect must design a rectangular shed of exactly 200 square feet. Give the dimensions of at least three different rectangles that will fulfill the requirements.
- An architect has been commissioned to renovate an old house. The owners do not want to spend over $50,000 on the entire job, including the cost of the house, which was $22,500. The architect already has contracted out plumbing work of $3,000, electrical work of $3,500, and heating and air-conditioning work of $6,000. How much money is left for completing the job?

See answers at end of chapter.

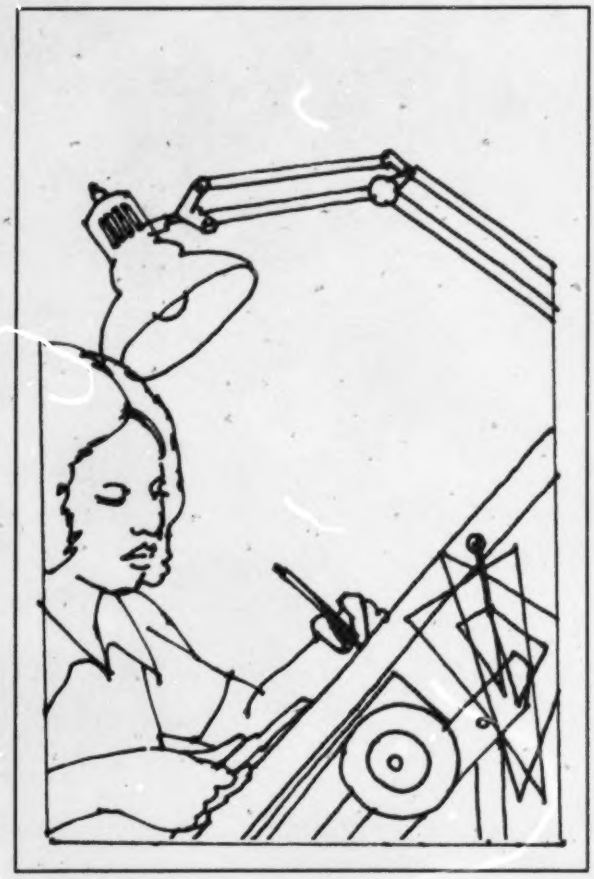
Write for career information to the American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006.

Related Occupations

Architects aren't the only people whose jobs involve planning, designing, and building objects or structures. Match the occupational title with the correct definition.

1.	Building contractor	a.	Plans lawns and gardens for parks, airports, hospitals, schools, stores, factories, and homes. May plan and arrange trees, shrubbery, open spaces, and other features, as well as supervise any grading, construction, and planting.
2.	Civil engineer	b.	Contracts to perform construction work by making an estimate of the cost of the work, submitting a bid, and having it accepted. Purchases materials and hires labor for construction, and supervises the work.
3.	Planner	c.	Prepares detailed drawings based on rough sketches, specifications, and calculations made by scientists, engineers, architects, and designers. Also calculates the strength, quality, quantity, and cost of materials.
4.	Interior designer	d.	Helps communities make decisions to solve their social, economic, and environmental problems. Develops programs to provide for future development of urban, suburban, or rural communities.
5.	Industrial designer	e.	Measures construction sites, helps establish official land boundaries, assists in setting land valuations, and collects information for maps and charts.
6.	Landscape architect	f.	Plans and supervises the design, color scheme, and arrangement of building interiors and furnishings. Estimates costs and selects materials to present to client for approval.
7.	Drafter	g.	Designs and supervises the construction of roads, harbors, airports, tunnels, bridges, water supply and sewage systems, and buildings.
8.	Surveyor	h.	Combines artistic talent with knowledge of marketing, materials, and methods of production to improve the appearance and functional design of a product.

See answers at end of chapter.



Newspaper Reporter

"The investigative side of reporting is the most challenging part of my job."

Linda picked up the phone on the second ring.

"*The Messenger*. Good morning. May I help you?" she said in rapid-fire fashion. She was in a hurry that morning, had already taken five phone calls, and wasn't really in the mood for a sixth. But you never knew. Any call might be "the" call, the one leading to the story of the century. Or the story of the week, at any rate.

At the other end of the line, a tiny voice announced that his name was Joey, that he was 9 years old, and that he thought he had a story for her. A tree in his backyard had been knocked over during the weekend rainstorm, he explained, and two baby squirrels had been orphaned and left homeless.

Well, that wasn't Linda's idea of a big story. It might do for filler in a small-town newspaper, but it didn't have the right appeal for a weekly paper that served 35,000 suburbanites. Linda had learned from 6 months on the job that a news reporter had to know her audience in order to select suitable topics for articles. Since the paper came out only once a week, every story had to count.

Besides, it was Tuesday, and *The Messenger* came out on Thursday. Linda was busy enough with last minute follow-ups for stories she already had begun. Not that it was too late to start looking into a new story, but it would have to be something special. Soon she'd have to start typing up all her articles for Thursday's edition. On many Tuesdays she ended up typing for 5 or 6 hours, so she had to make sure she allowed enough time for that task. Linda thanked Joey and told him she was afraid she wouldn't be able to use his story.

The Messenger was a small weekly community newspaper. Like other weeklies, it operated with a small staff: Two news reporters, one photographer, and four editors altogether. Fortunately, the two reporters weren't responsible for all the articles that went into each edition. The newspaper bought some syndicated articles and columns that also appeared in other newspapers around the country. These articles came from a syndicate, or organization, that sold them to a number of different newspapers for publication at the same time. In addition, the newspaper used a number of "stringers," freelance writers who covered specific topics such as church and garden club activities and community meetings. Juan Rodriguez was one of their best stringers. Juan was a junior at Central High, and he reported on the school's basketball games. For each of his stories that was published, Juan received $10. Another source of material for the newspaper was the press releases sent in by local government agencies, political figures, local firms, and community groups.

The door opened and Bill, *The Messenger*'s other reporter, walked quietly into the office. He had just returned from interviewing one of the candidates running for an at-large seat on the school board. He dropped his note pad on his desk and fell wearily into his seat. "Boy, I can hardly wait until Thursday so I can get some sleep!" he said. Both reporters had been working long hours this week, and no rest was in sight until after the paper was completely put together.

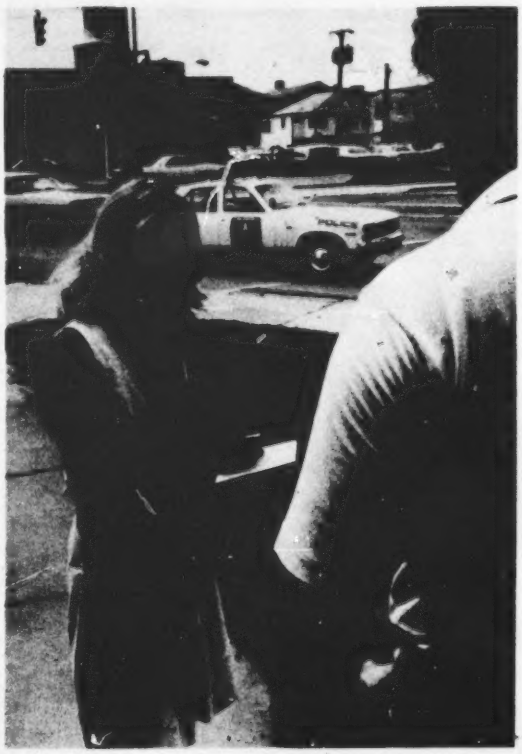
Bill sat down at his desk, inserted a piece of paper into his typewriter, and began typing from his notes. Linda glanced around at the other four desks which, together with hers and Bill's, filled the large office. The room gave the impression of ceaseless activity, with papers scattered on all the desks, typewriters clicking, and phones ringing continuously. Once she had trained herself to ignore all the background noises, Linda found that working in this busy environment was a spur to her own activity. The energy in this room seemed to be contagious. And working so closely with others on the staff kept her aware of every aspect of producing the newspaper.

As far as the news was concerned, Linda was at the center of activity. Her workweek began on Thursday morning and didn't end until Wednesday night when the newspaper staff "put the paper to bed."

Linda and Bill discuss the stories they will cover this week.

The Thursday before, Linda and Bill and the managing editor, Craig, had met as they did every Thursday to put together the story lists—the list of stories each reporter would cover for the week. Stories were assigned to each reporter according to his or her beat. Linda's beat was broad; she was responsible for covering the State General Assembly, the City Council, transportation, the fire and police departments, and parks and recreation. Covering so many different areas was one of the things that Linda liked best about working on *The Messenger*. The job required a broad knowledge of the community. If she were working on a city paper, she probably would cover just one small area of news—business and finance, perhaps, or education. She might be so busy covering the news that she wouldn't even have time to write the stories herself. In that case she would just call in her stories to another writer. Linda thought she got a much wider range of experience on *The Messenger*.

Linda liked to uncover the inside story, to find out what was really going on in the community. The investigative side of reporting was the most interesting and challenging part of her job. At the same time, it probably was the most difficult part, and something she had not been fully prepared to handle when she first started work. Even with a degree in journalism! Only through experience had she learned how much research was involved in reporting, and how vital it was for a reporter to know where to go for information. Reporting for a weekly newspaper often involved more research than reporting for a daily paper would. Because Linda and Bill didn't always have the advantage of publishing a big story as soon as it broke, they compensated by spending more time on their articles. They'd do extra research into the subject or present a new slant on a story. Many times they'd take a more personal human interest approach than a reporter on a big city daily would.



"I spend a large part of my time checking out leads for stories."

To keep up to date on what was happening on her beat, Linda often had to work nights as well as days, attending meetings of the City Council, the Parks and Recreation Commission, and citizens' groups. Covering meetings, Linda discovered, was not easy, and the proper techniques were not always taught in school. Interviewing 1 or 2 people at a meeting was not enough; she often had to speak to 20 different people. And she found that she had to do research before the meeting began to find out what was scheduled on the agenda, and to explore the different sides of each issue.

Attending meetings was just one way of gathering information for stories. Linda also used leads furnished by people who were in a position to know something useful. Developing these sources or contacts in the right places was another part of Linda's job. Of course, leads didn't always come from regular sources; often they came from total strangers who called in with questions or complaints or information they thought might be of general interest. Like Joey.

Linda spent a large part of her time checking out these leads for stories, but not all of her research was fruitful. Out of a dozen or so tips, only a few would result in articles. Sometimes she did research at the local library. Other times she had to examine police records or go to the County Clerk's office at the courthouse to look through records on file there. Most of the time, though, she used the telephone to check out leads.

A few days before, someone had called in to ask why construction work was beginning on parkland owned by the county. Linda quickly found the right people to talk to: The director and the public information representative of the county park department, then the county's lawyers, then the land developer and his attorney, and finally back to the park authorities. Just yesterday Linda learned that the county had decided to take the developer to court. That was one lead that had developed into an

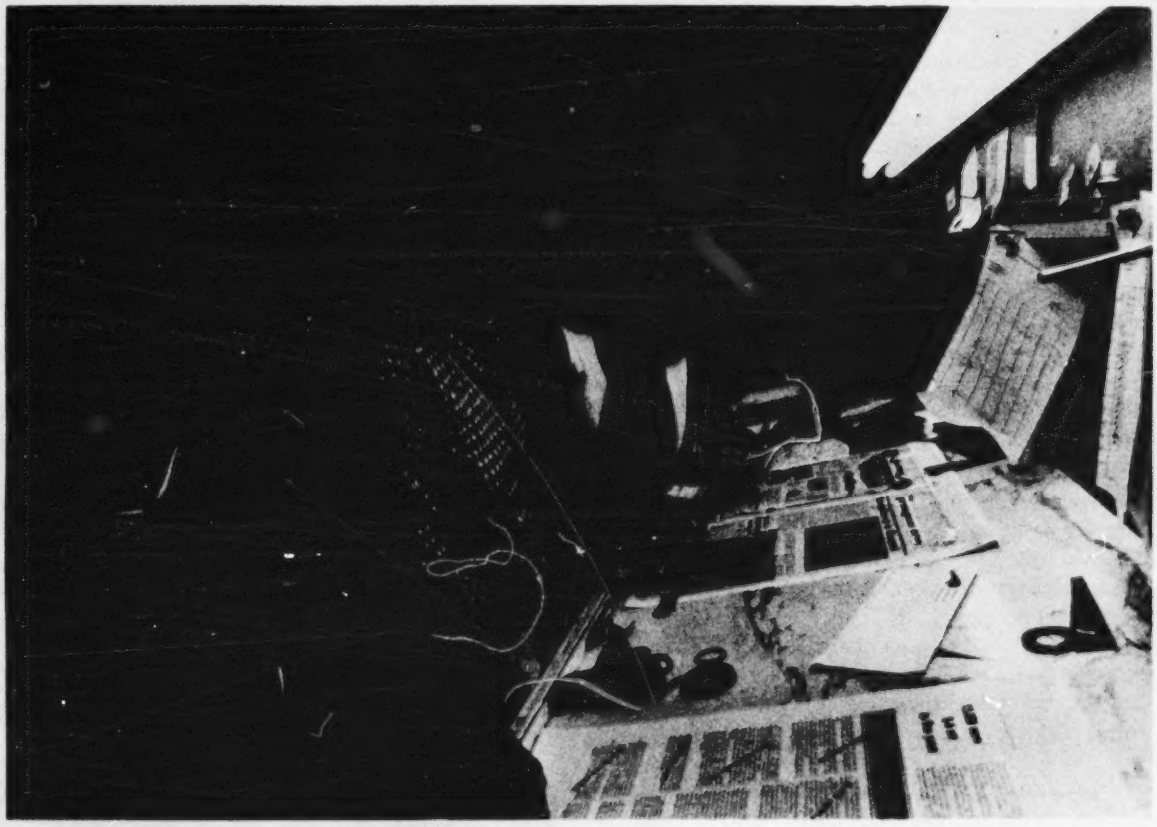
interesting article, and Linda felt the satisfaction of having done something worthwhile for the community as well. Knowing that people depended on her for news also gave Linda a sense of responsibility.

Linda began gathering her notes from the stories she had followed during the past week. Most of her articles had yet to be composed from the fragments of notes she had hurriedly scribbled during telephone conversations or interviews. She usually ended up doing most of her composing at the typewriter—a skill that required her to think clearly, accurately, and creatively under pressure. It's not easy to write an article so well the first time that little rewording is necessary, but Linda found herself improving with practice.

Linda decided she'd better take advantage of the lull in activity and start typing her articles. She knew there were likely to be many interruptions throughout the afternoon. The typed articles had to be ready by tomorrow morning so that they could be edited, retyped, and then entered into the composing machine that would set them in columns of type.

Linda and other members of the staff would spend most of Wednesday arranging and pasting up the "flats." The flats were large sheets of cardboard on which were pasted the photographs and typeset articles that would appear in that week's edition of *The Messenger*. In pasting up the flats, the reporters followed the layout design for each page that showed placement of articles and photographs. The layout designs, called "dummy sheets," were drawn up beforehand by the editors. The pasted flats would later be photographed and metal plates made from the negatives. The metal plates would then be used to print actual copies of the newspaper.

Linda turned to her typewriter, inserted a clean page of paper, and began typing the opening paragraph of her lead article. "The next day and a half will be hectic," she thought to herself, "but by Thursday morning the paper will be out on the street." Then there would be some time to relax, at least until the new stories were assigned and the cycle started all over again....



Linda helps arrange and paste up flats.

Exploring

Newspaper reporters communicate ideas. They must be good at expressing themselves in writing.

- Do you enjoy writing letters to friends?
- Do you write poetry or short stories in your spare time?
- Do you keep a diary or journal?
- Is English one of your favorite classes?
- Are you good at writing term papers?
- Are you good at doing essay questions on tests?
- Are you good at crossword puzzles, Scrabble, Password, and other word games?

Newspaper reporters need an insatiable curiosity to get all the details for a story.

- Do you enjoy talking to people?
- Are you interested in hearing many different points of view?
- Are you skeptical about things you read or hear?
- Do you check the facts before deciding whether something is so?
- Do you ask questions in class?
- If you don't understand an answer, do you ask again? Do you keep asking until you're sure you understand what a teacher or classmate is trying to say? Can you do this without rubbing people the wrong way?
- Do you use the encyclopedia?
- Do you use the dictionary to look up words you don't know?
- Do you follow current events? Do you read newspapers and magazines? Do you watch the television news?

Getting information is not always easy. Many times newspaper reporters run into obstacles when they're after a story. They need to be aggressive and confident.

- Are you outgoing?
- Are you comfortable talking to strangers?
- Do you enjoy selling tickets to dances or athletic events? Do you enjoy selling magazine subscriptions? Girl Scout cookies?
- Do you like collecting for charity drives?
- Are you confident in trying out for school activities?
- Do you strive for leadership positions in organizations?

Newspaper reporters have to rewrite their stories until they're just right.

- Do you rewrite your English papers several times before turning them in?
- Do you rewrite letters to friends?
- Do you check over your math homework before turning it in?
- Do you ever use a thesaurus when you're writing in order to find just the right word?

Newspaper reporters face deadlines all the time. They must be able to work under pressure.

- Do you get your homework assignments in on time?
- Are you able to take tests without panicking? Do you organize your time on tests to have time for all the parts?
- If a pressing deadline for a school project comes up, are you willing to spend extra time on it until it's finished, even if it means staying late after school or taking it home and working on it at night?
- Do you enjoy being busy and "on the go" all the time?

Newspaper reporters need to be flexible. Their assignments change often, and sometimes they have no advance notice at all.

- Can you work on more than one task at a time? Do you get everything done?
- Is it easy for you to go from one subject to another in your homework?
- Do you read several books at a time?
- Do you like variety and change in your weekly or daily schedule?

Newspaper reporters have to be able to think and write objectively. They should be honest, idealistic, and interested in the truth.

- Are you interested in many different points of view?
- Can you tell when someone has a biased viewpoint?
- Are you good at settling arguments with rational thinking?
- Do you believe in telling the truth even if it hurts someone?

Suggested Activities

Join the staff of your school newspaper or yearbook.

Volunteer to help with the newsgathering, editing, and production of the newsletter for your synagogue, church, or community organization.

Contact the editor of your local newspaper and offer to cover sports activities at your school.

Arrange to submit a regular column about activities at your school to your local newspaper or radio station.

Volunteer to handle publicity for a school event such as a science fair, concert, career day, or awards ceremony. Prepare a press release; arrange for a radio interview.

Design a new kind of magazine. First decide who your audience will be, and what kinds of news and features you will include. Make your magazine different in some way from other magazines. Design the cover and the layout.

Join a writing or journalism club such as Future Journalists of America or the Quill and Scroll Society.

Creative writing is important in all journalistic endeavors. Try developing this skill through one or more of the following types of creative expression.

- Start a creative writing magazine if your school doesn't have one.
- Enter a poetry reading contest.
- Ask permission to do poetry readings over the loudspeaker before the morning announcements. You might want to read old favorites or compose your own.
- Write new words to old songs.
- Write poetry, short stories, or essays in your spare time. Ask your English teacher for comments on your work.

Write a letter to the editor of your local newspaper about an important issue in your community. See if your letter is printed.

Invite a freelance writer to speak to your English class about his or her work. Prepare questions in advance on story ideas, publication possibilities, and the pros and cons of freelance writing.

Invite the editor of a weekly newspaper and the editor of a daily newspaper to class to discuss their jobs. Explain in advance that your class is interested in learning some of the similarities and differences in their jobs.

Join a debate team or club.

Use one or more of the following topics for discussion in your English or social studies class:

- A reporter for a national newspaper must decide whether to write an article that exposes a friend's wrongdoing.
- A reporter for a small suburban newspaper is asked not to write an important piece because the publisher knows it will offend a prominent citizen.
- An editor wants a novelist to add a chapter with some violent action so that the book will sell better even though the addition will detract from the theme of the novel.
- Where should one draw the line between a newspaper's right to know facts versus an individual's or company's right to privacy?

If you are a Girl Scout, see if your local troop has the From Dreams to Reality program for exploring careers. Troops may also offer opportunities to test career interests through proficiency badges in a number of areas including Creative Writer, Player Producer, and Reporter.

If you are a Boy Scout, try for Communications, Journalism, Public Speaking, or Reading merit badges.

Join a Journalism or Communications Explorer Post, if there is one in your area. Exploring is open to young men and women aged 14 through 20. To find out about Explorer posts in your area, call "Boy Scouts of America" listed in your phone book, and ask for the "Exploring Division."

Write for career information to The Newspaper Fund, Inc., Post Office Box 300, Princeton, New Jersey 07540; Society of Professional Journalists (Sigma Delta Chi), 35 East Wacker Drive, Chicago, Illinois 60601; and American Newspaper Publishers Association Foundation, Post Office Box 17407, Dulles International Airport, Washington, D.C. 20041.

Exploring Careers

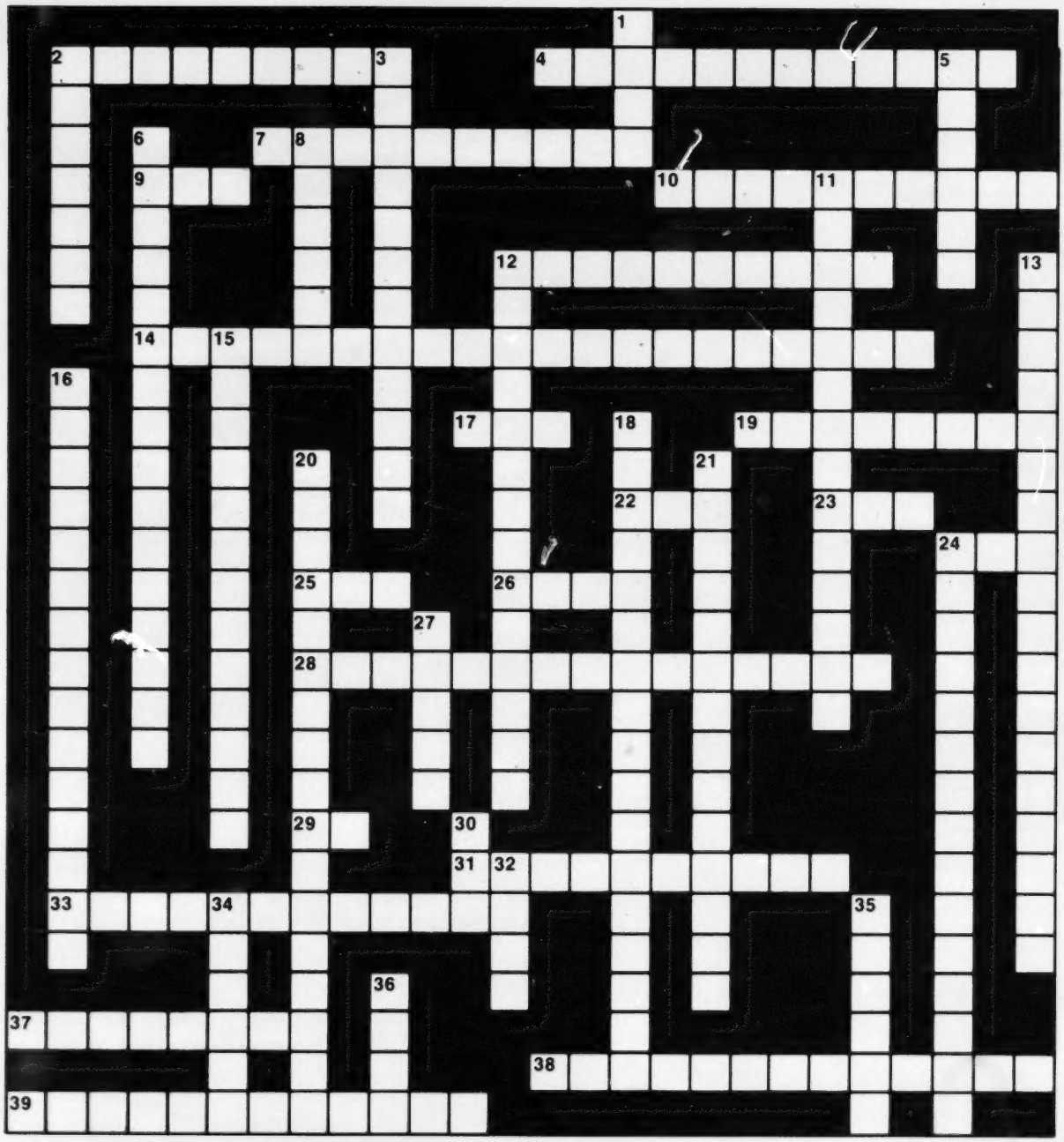
Related Occupations

Newspaper reporters aren't the only people with writing and publishing jobs. The crossword puzzle below includes quite a few writing occupations—and some newspaper "lingo" as well.

See answers at end of chapter.

Down

1. One who writes verse.
2. A(n) _____ writer creates stories about imaginary characters.
3. Artist who prepares advertising or other newspaper or magazine page layout for reproduction. (2 words)

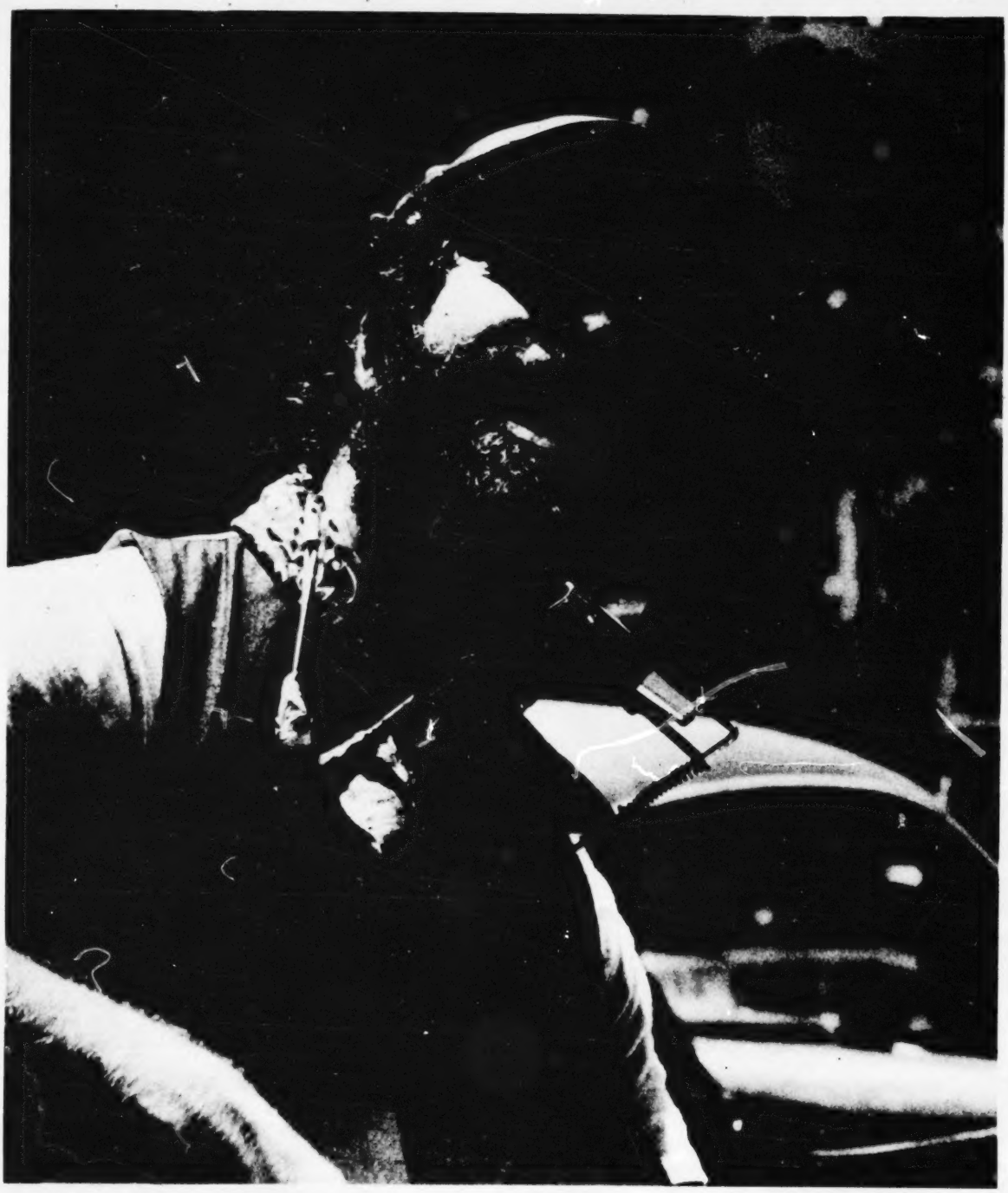


5. A person who is responsible for setting the policy of a newspaper or other periodical and deciding what will be printed.
6. Someone who writes short stories. (3 words)
8. A person who writes only the words to a song writes the _____.
11. A general term for a person who writes inventive poetry, short stories, or drama. (2 words)
12. Writes material for pamphlets or brochures. (2 words)
13. Someone who writes the messages on birthday, anniversary, and other holiday greeting cards. (3 words)
15. A person who markets clients' manuscripts to editors and publishers. (2 words)
16. This person tells a story using photographs instead of words.
18. Someone who teaches journalism. (2 words)
20. A person who writes textbooks. (2 words)
21. A newspaper writer who reviews and comments on the fine arts, such as painting, sculpture, and architecture. (3 words)
24. A newspaper staff person (often an editor) who writes an article expressing an opinion. (2 words)
27. One of the questions that should be answered by a reporter in his or her opening paragraph.
30. A(n) _____ reporter is a first-rate or expert reporter.
32. Speech writers produce *written* speeches while public speakers give _____ speeches.
34. It helps for a newspaper reporter to be a good _____ since he or she will probably spend a lot of time composing or rewriting at the typewriter.
35. A line printed above a newspaper or magazine article, telling who wrote it.
36. One of the questions that should be answered by a reporter in his or her opening paragraph.

Across

2. A(n) _____ reporter writes about money matters.
4. One who writes about or comments on newly published books. (2 words)
7. One who writes drama.
9. One of the questions that should be answered by a reporter in his or her opening paragraph.
10. One who comments on motion pictures.
12. Someone who writes an account of another's life.
14. Someone who writes material designed to promote sales. (3 words)
17. One of the questions that should be answered by a reporter in his or her opening paragraph.
19. A person who writes novels.
22. A news or wire service.
23. One of the questions that should be answered by a reporter in his or her opening paragraph.
24. Abbreviation for "English".
25. A(n) _____ reporter is a novice or beginning reporter.
26. One of the questions that should be answered by a reporter in his or her opening paragraph.
28. Someone who puts scientific and technical information into language that can readily be understood by others. (2 words)
29. A news or wire service.
31. A person on a newspaper or magazine who selects, arranges, and revises the "copy", or written material, in preparation for publication. (2 words)
33. Someone who writes about athletic events.
37. One who writes essays.
38. A newspaper or magazine reporter who sends in articles from a particular geographical location (as in a foreign "_____").
39. A person who writes the written part of a play or radio show.

Street Musician



"I'm lucky to be able to support myself making music."

Bob looks the crowd over with a practiced eye as he strides up to the busy corner in the heart of the business district. "Mostly office workers out for lunch, as usual, but there seem to be some tourists today too. Quite a mixture, in fact. They have the makings of a good audience," he thinks to himself as he begins to set up his gear.

He removes the backpack that holds his guitar and a folding stool, then sets up his speaker system and hooks the microphone into it. After removing his guitar and leaning it upright against the stool, he unpacks a large cymbal and places it on the ground. He takes several record albums out of the pack and props them up against the speaker. Next he pulls his harmonica out of a side pocket of the pack and attaches it to a brace around his neck. Finally he places a very small cardboard box a few feet in front of the stool.

"Hello, folks. How are you today?" he says into the mike as he sits down and begins tuning his guitar. A few people stop to watch, but most just continue on their way. Bob blows into the harmonica a few times, strums a chord, and then, assured that his guitar is in tune, begins to play.

"Bob Devlin's my name, and I'm going to start off today with an old ballad that you may know." With that, Bob starts to sing. More people stop to watch. As he begins the second verse, he can feel himself warming up to the song. About a dozen people have gathered around him, although most of the sidewalk traffic is still moving. As he finishes his song, a distinguished-looking man in a pin-striped suit walks over and drops some coins into the box. Bob acknowledges the contribution with a nod and a smile, then moves right into another tune. A faster one, this time. His right foot moves in time to the music, tapping the brass cymbal.

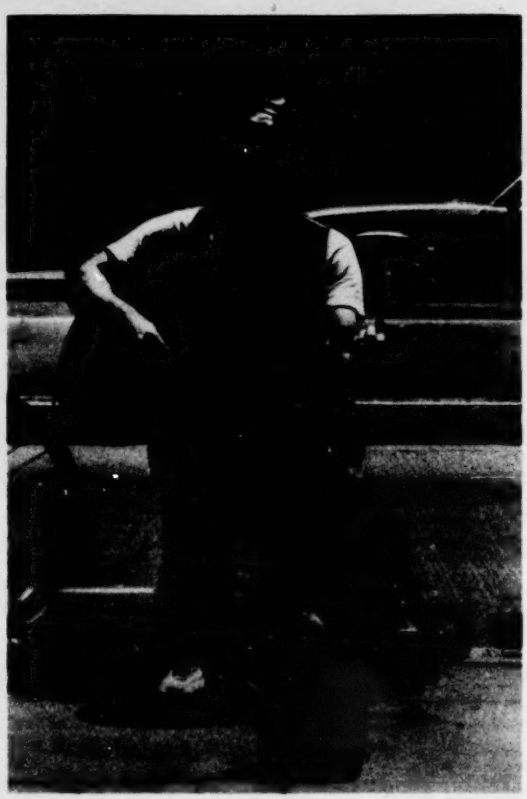
He's feeling fine. It is a beautiful summer day, sunny and warm, and Bob knows from experience what a difference the weather makes to a street musician. A balmy day like this is perfect. Bob moves quickly from one song into another, pausing between songs only now and then to talk to the people gathered around him.

A number of people know him, or at least recognize him, and call to him by name. Bob has played on this corner before, and many of the people who work in nearby office buildings are familiar with his music. They make a point of coming when they find out that he's giving a lunchtime concert here. Bob is pleased with the audience he's developing in this part of the city.

And that audience, after all, is one of the main reasons he plays on the street. The money's good—for only a few hours' work he can make $40 on a good day. But the main advantage of playing on the street is the exposure he gets. More people hear him play on this corner sidewalk than would hear him play at a coffeehouse or club. In fact, most of the club dates he's gotten lately have come about because someone from a nightclub heard him on the sidewalk, liked his music, and offered him the job. Playing on the street has actually saved him the trouble of having to go and audition.

Right now, Bob's musical goal is to make a name for himself in Washington, D.C. He wants as many people as possible to recognize his name, his face, his musical style. He hopes that as he becomes better known, more and more people will make an effort to catch his performances—on street corners, in the parks, at craft fairs, wherever he happens to be playing. Then, as his reputation grows, there will be more demand for him to perform. Later on, Bob hopes to go on tour with an established singer or group. And he expects to make more records.

Bob already has made one album. He cut the album last fall, knowing how hard it would be to make a living by playing on the street once winter came and the



Although Bob has made a record album, most of his income comes from live performances.

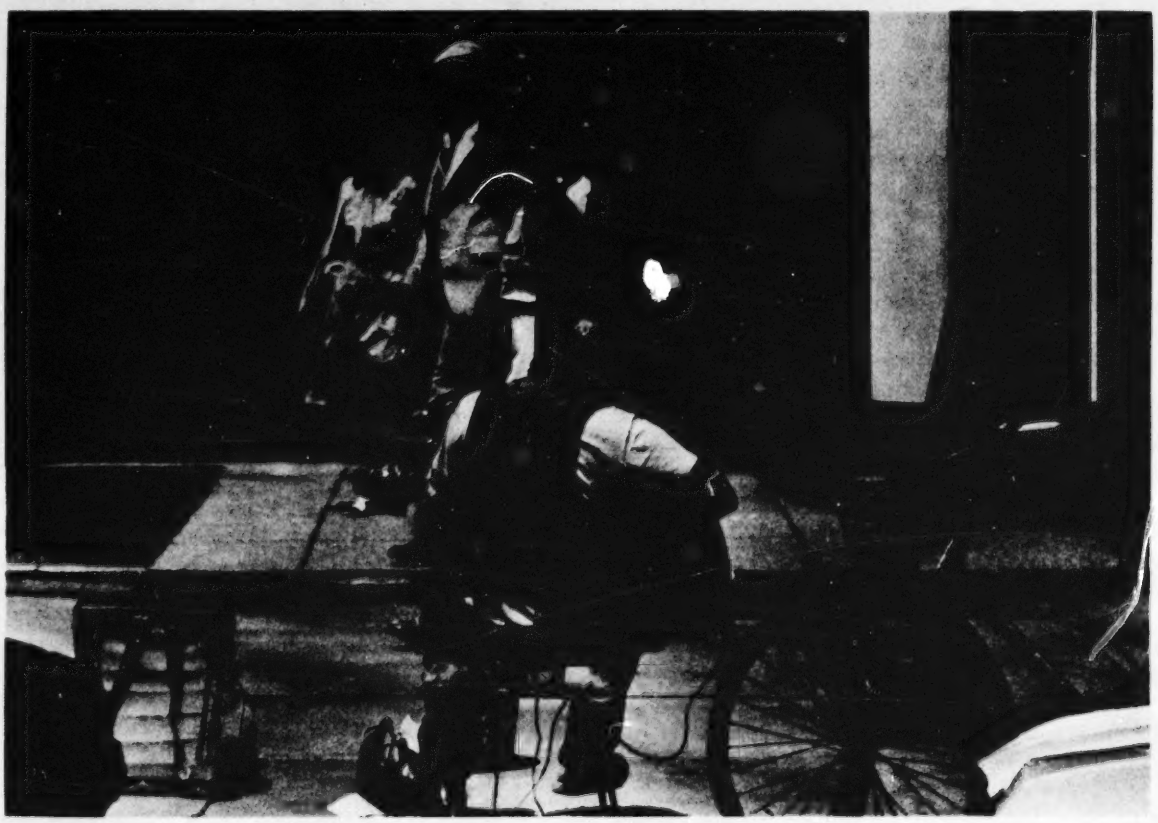
weather turned cold. Bob hoped that his record sales would bring in enough income to tide him over the winter. He sold them throughout the year wherever he played, in nightclubs, coffeehouses, and private parties.

Like all musicians who are just starting out, Bob had to cover the cost of cutting the record himself. He used his savings, around $700, and borrowed the rest from friends. He made the recording, or master tape, during a session when he was playing on the street. That saved him the expense, which can be quite substantial, of having to rent a recording studio. Later he took the master tape to a record pressing plant that transferred the taped recording onto a master disc. The master disc was then used to create the molds, called stampers, that were used in pressing the records. Having the album covers made was expensive, but Bob was able to afford both the album and the covers at the same time. In the end Bob found that the $1,100 he had was enough money to cut about 500 records.

Selling his records at $5 each, Bob was able to regain his initial investment after selling less than half of the first printing. From then on, everything he sold was pure profit. He sold all 500 records within 7 months, and, when people continued to ask to buy copies, he decided to print 1,000 more! With the master disc already made, the second printing was much less expensive. He paid for those records with money he had saved from earlier record sales.

A few college and underground FM radio stations have given his music air time, but he's found it difficult to get his music played on most of the commercial AM stations. "I'm lucky to have opportunities like this to advertise my record," he thinks as a teenager in faded jeans picks up one of the albums and then pulls a wallet from her pocket. Most of Bob's income still comes from performing, however.

As Bob finishes another song, a few people begin to clap. Soon the entire crowd is applauding. He pauses for a moment, then starts into a well-known folk tune. "You probably all know this one," he says, "so sing along if



The music Bob plays is easy to listen to and appeals to a large audience.

you like." The music Bob plays is easy to listen to and appeals to a large audience. That's part of the reason for his success. It would be harder to be a successful street musician with a classical repertoire. His rapport with his audience is another reason for Bob's popularity. He talks and jokes with the people gathered around him in a relaxed, easygoing way. At the same time, Bob attributes some of his success to downright practical considerations—picking the right time of day and the right places to play.

The crowd around Bob grows larger, and people start walking up and dropping money into his box. He continues playing, responding to the encouragement and appreciation of his audience.

Bob has been a professional musician for only a few years. He never thought seriously about being a musician when he was growing up, even though he's played the guitar since 8th grade. He never even took guitar lessons—just learned to play by ear, picking up what he could from friends. He played occasionally in coffeehouses while he was in high school and college, but at that time he thought of music as a hobby rather than as a possible career. Shortly after college, however, he decided that he was bored with his job as a shipping clerk in a warehouse. Playing on the street might be an interesting way to earn some money, he decided. So he gave it a try.

Once he started playing on the street he realized how important music was to him. All of a sudden he knew that, if he could manage it, he wanted to devote himself to music for the rest of his life. Bob feels lucky to be able to support himself by making music. For only the $15 annual cost of a vendor's license, he's able to play on the street whenever he wants, and make enough to live.

Bob knows that performing is a very competitive field, and he doesn't expect to become famous overnight. Until he does, he's content with days like today, when he's able to share his music with people on a street corner. For Bob, a life that revolves around music is reward enough.

Bob knows that performing is a very competitive field, and he doesn't expect to become famous overnight.

Exploring

Musicians have to be devoted to their music.

- Do you love listening to music? Do you often get involved in, excited by, or caught up with the music you hear?
- Would you rather go to a concert than to a movie or play?
- Would you rather play your musical instrument or sing than take part in a sports event or read a book?
- Do you ever think of songs that express your feelings?
- Do you ever write songs?
- Do you relate easily to characters in stories or movies who are musicians?
- Do you ever daydream about playing in front of an audience?

Musicians must be good at recognizing and reproducing sound differences. They need a "good ear" for music and rhythm.

- Can you tell when someone is singing off key? Can you tell when someone plays a flat note on a musical instrument?
- Can you pick up the beat after hearing just a few bars of music? Can you remember the beat to a song the next day? Do you like to tap out rhythms on desk tops or chair arms?
- Can you pick out a tune you know on a piano or guitar without reading the music?

Musical ability is only partly a matter of talent; practice is responsible for the rest. Musicians spend many hours practicing.

- Can you stick with a task to perfect it? Do you rewrite your English compositions or rework your math homework?
- How willing are you to practice the skills you have now? Do you practice the piano, typing, your foul shots for basketball, your tennis serve, or your cheerleading cheers?

Musicians, like all performing artists, have to be comfortable in front of an audience.

- Do you like being the center of attention?
- Can you speak in front of the class without getting embarrassed?
- Are you good at telling jokes?

Musicians need to be good at memorizing the words or music they perform.

- Is it easy for you to memorize words and tunes to popular songs?
- Do you have a good memory for names, phone numbers, and addresses?
- Can you remember the right keys to hit when you're typing?
- Are you good at memorizing poetry?

Musicians sometimes have to perform when they don't want to, or perform pieces that they've grown tired of.

- Can you put your own wishes aside in order to please other people?
- Can you hide your feelings from your friends when you're tired, upset, or bored?

Suggested Activities

If you play an instrument or enjoy singing, get together with some friends and form a musical group. Meet regularly; once a week is probably about right. Play for the fun of it. Offer to perform at a hospital or nursing home.

Make a tape recording of your playing or singing. Hearing yourself on tape can help you improve your sound.

Join your school band, orchestra, or chorus. Join a community orchestra or chorus. Join a church choir.

Participate in school drama or musical productions. Performing can help you develop stage presence.

Enter talent shows.

Perform in amateur nights, open stages, or even gong shows at local coffee houses or clubs. Many clubs hold these once a month or so. They are a good way to test yourself in front of a real audience, and maybe even get bookings.

If you think you're good enough, try to get an engagement to play in a local coffeehouse. The pay may be low, but the exposure will be good.

Invite a church organist, school band director, chorus director, music teacher, or other musician in your community to speak to your class about his or her career.

Use music as a topic for a report in your English class. Investigate one or more types of music such as classical, folk, jazz, country and western, rhythm and blues, rock and roll, or soul. Discuss the origins and development of the musical style you choose, and give examples of works.

Use the biography of a musician for a book report in your English class.

Try to set a limerick or poem to music. Take a familiar song and write new words for it.

List the different radio stations in your area, noting the different types of music that each specializes in.

Check out a record from your local library to learn more about different styles of music.

Ask your teacher to invite an audio-engineer or a disc jockey from a nearby radio station or recording studio to speak to your class about his or her job.

Volunteer to organize musical activities for young children at a Sunday school, nursery school, day care center, or summer camp.

As a report for your science class, find out how a computer "writes" music.

Write a musical commercial for a coming school event, organize the talent to perform it, and play it over the public address system with the daily announcements.

Take charge of coordinating the music for a school "disco" dance. This means planning what songs should be played and what order to play them in. You may want to use a tape recorder instead of a record player, and tape the songs ahead of time in the order you want them.

Not everyone working in the field of music is a performer. Production and sales, for example, are important aspects of the music industry. Invite the owner or manager of a record or music store to speak to your class about his or her business. Prepare questions in advance about running a small music business.

Compile a directory of performing music opportunities in your community, including both paid and unpaid opportunities.

Invite a piano tuner to visit your class and talk about his or her work. Ask the speaker to talk about training opportunities and job prospects.

As a report for your science or social studies class, examine the ways in which technological change has affected musicians. For example, you might explore the effect of tape recorders, radio, amplification equipment, electronic instruments (guitars, organs), cartridge players in cars, electronic equipment such as synthesizers, or computerized composition. Consider, as examples, the effect of recordings on the use of live musicians for rehearsals; the effect of the spread of discotheques on employment of live musicians; and the effect of amplification on trends in styles of music.

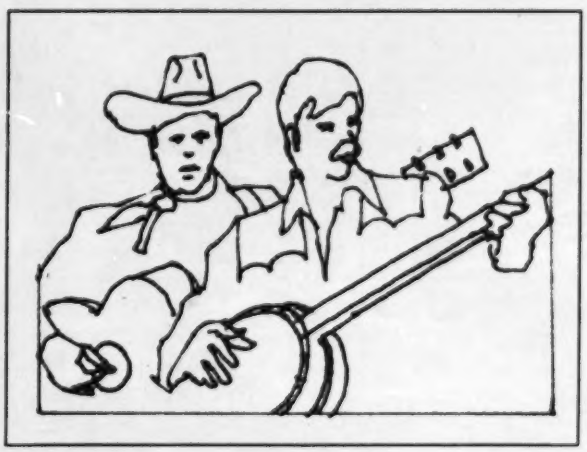
Report to your class on one of the careers you identify in the Related Occupations section that follows.

If you are a Girl Scout, see if your local troop has the From Dreams to Reality program for exploring careers. Troops may also offer opportunities to test career interests through proficiency badges in a number of areas including Minstrel and Music Maker.

If you are a Boy Scout, try for the Music merit badge.

Join a Music Explorer Post, if there is one in your area. Exploring is open to young men and women aged 14 through 20. To find out about Explorer posts in your area, call "Boy Scouts of America" listed in your phone book, and ask for the "Exploring Division."

Write for career information to National Association of Schools of Music, 11250 Roger Bacon Drive, #5, Reston, Virginia 22090; and Music Educators National Conference, 1902 Association Drive, Reston, Virginia 22091.



Exploring Careers

Related Occupations

There are many different jobs in the field of music. The puzzle below includes 23 of them. How many can you find? Words may be backwards or forwards, horizontal, vertical, or diagonal.

ARRANGER
CHORUS DIRECTOR
CHURCH MUSICIAN
COMPOSER
CONDUCTOR
DISC JOCKEY
FOLK MUSICIAN
INSTRUMENTALIST
INSTRUMENT CRAFTSPERSON
INSTRUMENT SALESPERSON
MUSIC CRITIC
MUSIC LIBRARIAN
MUSICOLOGIST
MUSIC TEACHER
MUSIC THEATER DIRECTOR
MUSIC THERAPIST
OPERA SINGER
ORCHESTRATOR
PIANIST
RECORD PRODUCER
ROCK MUSICIAN
STUDIO MUSICIAN
VOCALIST

See answers at end of chapter.

I	T	B	L	A	N	O	R	C	H	E	S	T	R	A	T	O	R	O	C	T	I
S	N	A	I	R	A	R	B	I	L	C	I	S	U	M	C	P	B	A	M	L	N
U	S	S	O	D	T	C	H	U	R	C	H	M	U	S	I	C	I	A	N	A	S
I	N	S	T	R	U	M	E	N	T	A	L	I	S	T	H	M	A	R	I	M	T
R	A	K	S	R	J	E	F	O	L	R	C	I	A	N	U	P	L	T	U	S	R
M	I	D	L	M	U	S	I	C	O	L	O	G	I	S	T	A	N	S	F	E	U
I	C	L	O	U	O	M	A	V	O	C	A	L	I	S	T	T	I	O	N	I	M
S	I	M	R	A	Y	A	E	S	M	A	N	C	A	R	O	C	I	P	E	T	E
T	S	Y	O	D	P	I	A	N	I	S	T	S	E	N	C	H	B	E	V	E	N
N	U	L	T	R	A	N	S	O	T	E	L	S	O	R	V	I	A	R	N	N	T
O	M	S	C	U	E	S	T	R	A	S	O	U	I	L	I	B	A	A	A	G	C
U	K	T	U	Y	B	T	I	C	F	P	A	T	G	R	R	A	R	S	I	A	R
G	L	A	D	E	V	O	H	O	M	N	I	L	S	A	C	H	R	I	C	O	A
H	O	B	N	K	S	E	G	O	A	C	R	I	E	M	O	T	A	N	I	T	F
S	F	O	O	C	R	W	C	U	F	T	E	N	T	S	R	I	N	G	S	S	T
A	R	E	C	O	R	D	P	R	O	D	U	C	E	R	P	N	G	E	U	N	S
X	S	L	A	J	H	O	U	S	T	A	V	I	R	S	T	E	E	R	M	R	P
M	U	S	I	C	T	H	E	R	A	P	I	S	T	A	O	P	R	L	K	P	E
J	O	H	P	S	T	U	D	I	O	M	U	S	I	C	I	A	N	S	C	T	R
O	M	U	S	I	C	T	H	E	A	T	E	R	D	I	R	E	C	T	O	R	S
R	O	S	I	D	G	U	A	V	I	S	E	N	T	U	P	T	P	I	R	N	O
E	D	P	R	U	R	O	T	C	E	R	I	D	S	U	R	O	H	C	P	A	N

Job Facts

There isn't room in this book for a story about every performing arts, design, and communications occupation. However, you'll find some important facts about 19 of these occupations in the following section. If you want additional information about any of them, you might begin by consulting the Department of Labor's *Occupational Outlook Handbook*, which should be available in your school or public library.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
PERFORMING ARTISTS			
Actors and Actresses	Actors and actresses perform in stage plays, motion pictures, radio and television programs, and commercials. In the winter, most employment opportunities on the stage are in New York and other large cities. In the summer, stock companies in surburban and resort areas provide jobs, too. Acting jobs in "little theaters", repertory companies, and dinner theaters are available year round. Employment in motion pictures and film television is centered in Hollywood and New York City. In television, most opportunities for actors are in New York, Los Angeles, and Chicago, at the headquarters of the major networks. However, some local television stations employ actors, too.	Talent is the most important qualification for a career in acting. Creativity and imagination, expressive ability, a clear, well-trained voice, poise and stage presence, and the ability to memorize are essential ingredients. Perseverance and the ambition to succeed are also important. Previous experience, including amateur productions, is very helpful in getting a professional acting job. Formal training in acting is also important. Colleges, universities, and dramatic arts schools offer courses and degrees in drama. Training and practice continue throughout an actor's career, however.	More actors and actresses than there are jobs makes this a competitive field. Many actors and actresses cannot obtain year-round work in acting, and must work at other jobs to make a living.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Dancers	Professional dancers perform in classical ballet, modern dance, and musical shows. They may perform on stage, screen, or television. However, relatively few dancers are full-time performers. Many dancers teach in colleges and universities, and at dance schools and studios. Teachers trained in dance therapy work in mental hospitals, nursing homes, and other facilities. Dance teachers are located chiefly in large cities, but many smaller cities have dance schools as well. New York City is the hub for performing dancers.	Talent, in the form of agility, grace, a feeling for music, and the creative ability to express oneself through dance are the most important qualifications. Average body height and build, good feet with normal arches, and a well-formed body with good muscle control are also important. In addition, dancers need a strong desire to become good dancers, determination, physical stamina, and perseverance. Serious training at a dance school or with a private teacher should begin at an early age, particularly for ballet. Training and practice are part of the daily routine and must continue throughout a dancer's career.	More dancers than there are jobs makes this a competitive field. Many dancers cannot obtain year-round work as performers, and must work at other jobs to make a living.
Musicians	Nearly all musicians play in musical groups, including symphony orchestras, dance bands, rock groups, and jazz combos. Popular musicians play in nightclubs, restaurants, and at special concerts and parties. Classical musicians play in symphony, opera, ballet, and theater orchestras, and in chamber music groups. Many pianists accompany soloists or choral groups, or provide background music in restaurants or bars. Most organists play in churches; often they direct the choir. In addition to performing, many musicians teach music in schools and colleges, or give private lessons in their own studios or in pupils' homes. Others combine careers as performers with work as arrangers, composers, or conductors. Musicians who have taken additional training work as music librarians or music therapists.	Musical talent, versatility, creativity, poise, and stage presence are important qualifications for musicians. Self-discipline, perseverance, and physical stamina are also necessary. Training on a musical instrument should begin at an early age. Music lessons can begin at school or with a private teacher. More advanced training can be acquired through further private study with an accomplished musician, in a college or university with a strong music program, or in a music conservatory. Training and practice generally continue through a musician's life, however.	Musicians often work at night and on weekends, and they must spend a great deal of time practicing and rehearsing. Performing engagements usually require some travel. More musicians than there are jobs makes this a competitive field. Many musicians cannot obtain year-round work as musicians and must work at other jobs to make a living.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Singers	Popular music singers perform in the movies, on the stage, on radio and television, in concerts, and in nightclubs and other places. Other professional singers are members of opera and musical comedy choruses. Outstanding singers may obtain leading or supporting roles in operas, popular music shows, or choral performances such as oratorios. Singing stars make recordings or go on concert tours in the United States and abroad. Some singers combine their work as performers with jobs teaching voice or directing choral groups. They give private voice lessons and direct choruses in schools, music conservatories, colleges, and universities. Many singers work part time as church singers and choirmasters. Opportunities for singing engagements are concentrated mainly in New York City, Los Angeles, Las Vegas, San Francisco, Dallas, and Chicago—the Nation's chief entertainment centers. Nashville is one of the most important places for employment of country and western singers for both "live" performances and recordings.	Musical ability, an attractive appearance, poise, and stage presence are important qualifications for a career as a singer. Perseverance and physical stamina are also necessary to adapt to frequent traveling and long and irregular working hours. Voice training is an asset for singers of all types of music. As a rule, voice training should not begin until after the individual has matured physically. Training can be obtained through private voice lessons or in a music conservatory or department of music in a college or university. In addition to voice, singers also should study music theory and composition. In general, training and practice continue throughout a singer's career.	Singers usually work at night and on weekends, and most spend considerable time in practice and rehearsal. Performing engagements often require some travel. More singers than there are jobs makes this a competitive field. Many singers cannot obtain year-round work singing and must work at other jobs to make a living.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
DESIGN OCCUPATIONS			
Architects	Most architects work in architectural firms, for builders, for real estate firms, or for other businesses that have large construction programs. Some work for government agencies, often in city and community planning or urban development. Although they work throughout the country, many architects are employed in just seven cities: Boston, Chicago, Los Angeles, New York, Philadelphia, San Francisco, and Washington, D.C.	Architects must be able both to work independently and to cooperate with others. They should be artistic as well as have a capacity for solving technical problems. A 5-year college program resulting in a Bachelor of Architecture degree is the usual way of entering this profession. All States require architects to be licensed for independent private practice. Unlicensed architectural school graduates work under the supervision of licensed architects. Admission to the licensing exam usually requires a Bachelor of Architecture degree followed by 3 years of experience, or a Master of Architecture degree followed by 2 years of experience.	An architect may have to work overtime and under pressure when necessary to meet deadlines.
Commercial Artists	Most commercial artists work for advertising departments of large companies, advertising agencies, printing and publishing firms, textile companies, photographic studios, television and motion picture studios, and department stores. Others are self-employed or freelance artists. Some salaried artists do freelance work in their spare time. Some artists teach in art schools. Although there are jobs for commercial artists in nearly every city, the majority work in large cities, such as New York, Los Angeles, Boston, Washington, D.C., and Chicago, where the largest users of commercial art are located.	Artistic ability, imagination, neatness, and a capacity to visualize ideas on paper are important qualifications for success in this field. People can prepare for a career in this field by attending a school that offers a program in commercial art. These include trade schools and technical institutes, community and junior colleges, and colleges and universities. Training in commercial art also may be obtained through high school vocational programs and practical experience on the job. Formal training beyond high school usually is needed for advancement, however.	Most commercial artists advance by specializing either in the mechanical elements of producing an ad (letterers and mechanical and layout artists) or in pictorial elements (sketch artists and illustrators).

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Display Workers	Most display workers work for large stores: Department stores, clothing stores, home furnishing stores, variety stores, drugstores, shoe stores, book stores, and gift shops. Freelance or self-employed display workers have accounts with small stores that need professional window dressing but cannot afford a full-time display worker.	Display workers need imagination and knowledge of color harmony, composition, and other fundamentals of art. Most display workers are trained on the job. A beginner can usually become skilled in 1 to 2 years. Employers usually require a high school diploma.	Constructing and installing props means standing, bending, stooping, and working in awkward positions. During busy seasons, such as Christmas and Easter, display workers may have to work overtime, nights, and weekends to prepare special displays.
Floral Designers	Nearly all floral designers work in retail flower shops, and these are found almost everywhere in large cities, suburban shopping centers, and small towns.	Manual dexterity and a good sense of color, balance, and proportion are important qualifications for floral design. Many floral designers are trained on the job by the manager or an experienced floral designer. Usually a trainee can become a fully qualified floral designer after 2 years of on-the-job training. Courses in floral design offered by community colleges and floral design schools also prepare people for careers in this field.	Most retail flower shops are small and employ only one or two floral designers; many designers manage their own stores. In small shops, floral designers often work 8 hours a day, Monday through Saturday. Designers generally work long hours around certain holidays, such as Easter and Valentine's Day, when the demand for flowers is great.
Industrial Designers	Most industrial designers work for large manufacturing firms or for design consulting firms. Some do freelance work or are on the staffs of architectural and interior design firms. The jobs of all these designers have one thing in common: They design products for consumer or industrial use. Some industrial designers teach in colleges, universities, and art schools. Industrial design consultants work mainly in large cities such as New York, Chicago, Los Angeles, and San Francisco. Industrial designers with industrial firms usually work in or near the manufacturing plants of their companies, which often are located in small and medium-sized cities.	Industrial designers need creative talent, drawing skills, and the ability to see familiar objects in new ways. They should be able to work and communicate well with others. To become an industrial designer, it's usually necessary to complete a 4-or-5 year program in industrial design. Such programs are offered by art schools and by the design or art departments of colleges and universities. Persons with degrees in engineering, architecture, and fine arts may qualify as industrial designers if they have appropriate experience and artistic talent.	Although most industrial designers are product designers, others develop trademarks or symbols that appear on products, advertising, stationery, and brochures. Some design containers and packages, while others design display exhibits. Industrial designers use both sketches and 3-dimensional models to convey their ideas.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Interior Designers	Most interior designers work for design firms or have their own firms. Some work in department or furniture stores, or for hotel and restaurant chains. Other designers work for architects, furniture suppliers, antique dealers, furniture and textile manufacturers, or other manufacturers in the interior furnishings field. Interior designers also have jobs with magazines that feature articles on home furnishings. Interior designers are employed primarily in large cities.	Interior designers should be creative, have good color sense and good taste, and be able to work well with people. Training in interior design is becoming more and more important. The types of training available include 3-year programs in a professional school of interior design, 4-year college or university programs that grant a bachelor's degree, or post-graduate programs leading to a master's degree or Ph. D. People starting in interior design usually serve a training period with a design firm, department store, or furniture store.	Interior designers' work hours are sometimes long and irregular. Designers usually adjust their workday to suit the needs of their clients, meeting with them during the evenings or on weekends when necessary. Some interior designers are paid straight salaries, some receive salaries plus commissions based on the value of their sales, and others work entirely on commissions.
Landscape Architects	Most landscape architects are self-employed or work for architectural, landscape architectural, or engineering firms. Government agencies concerned with land management, forests, water, housing, planning, highways, and parks and recreation also employ landscape architects. Some landscape architects work for landscape contractors and others teach in colleges and universities.	Drawing talent, a creative imagination, and an appreciation for nature are important qualifications for landscape architects. A bachelor's degree in landscape architecture takes 4 or 5 years. This degree is usually needed to enter the profession. Thirty-eight states require a license for independent practice of landscape architecture. Admission to the licensing examination usually requires 2 to 4 years of experience in addition to a degree in landscape architecture.	Some landscape architects specialize in certain types of projects such as parks and playgrounds, hotels and resorts, shopping centers, or public housing. Others specialize in services and resource management, feasibility and cost studies, or site construction.

Performing Arts, Design, and Communications Occupations

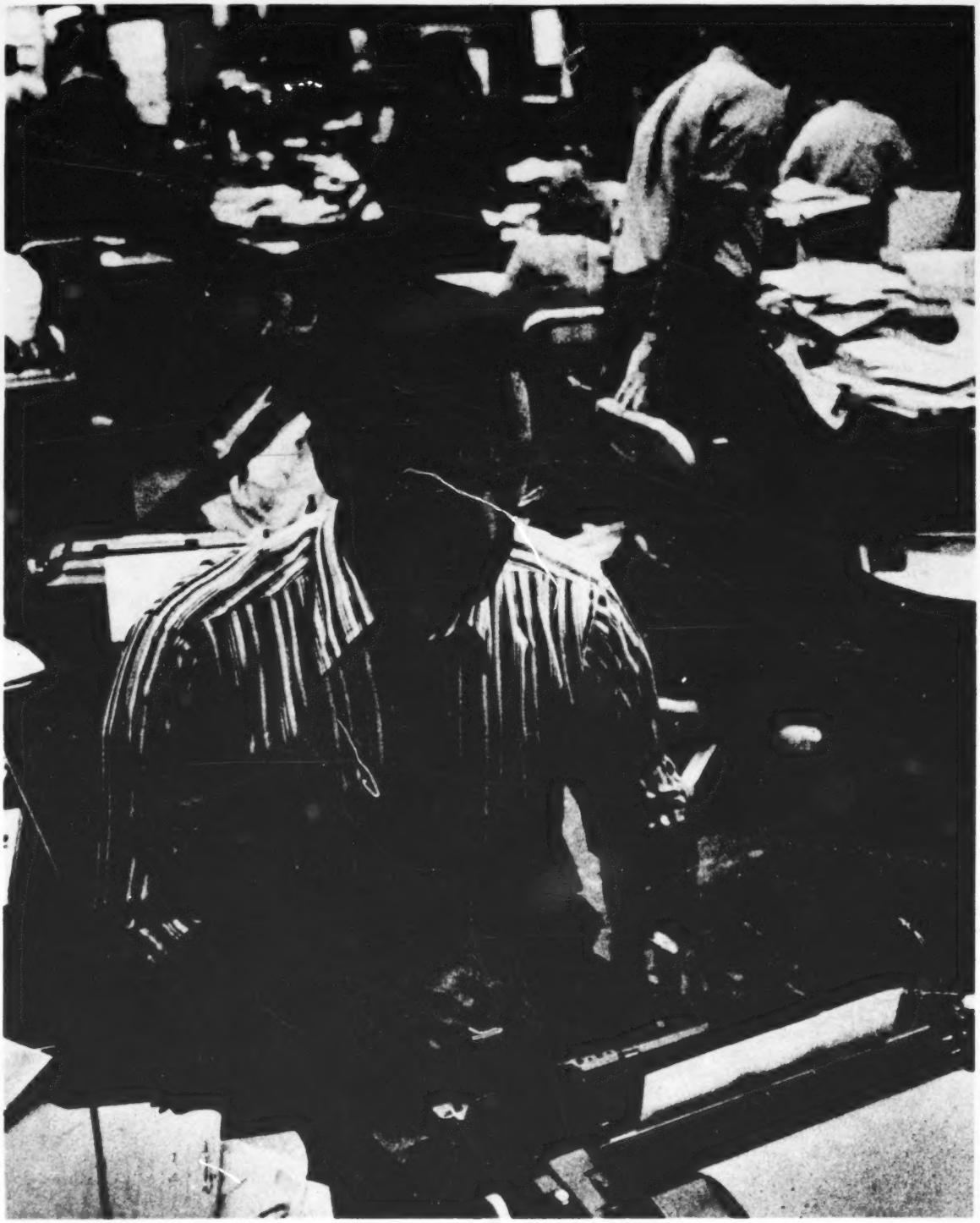
Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Photographers	Most photographers work in commercial studios; many others work for newspapers and magazines. Government agencies, photographic equipment suppliers and dealers, and industrial firms also employ photographers. In addition, some photographers teach in colleges and universities, or make films. Still others work freelance, taking pictures to sell to advertising agencies, magazines, and other customers.	Photographers need good eyesight and color vision, artistic ability, and manual dexterity. They also should be patient and accurate and enjoy working with detail. There are no set requirements for becoming a photographer. However, the training a prospective photographer has determines the type of work for which he or she qualifies. People may prepare for work as photographers in a commercial studio through 2 or 3 years of on-the-job training as a photographer's assistant. Training in photography can also be acquired in colleges and art schools. Post-high school education and training usually are needed for industrial, medical, or scientific photography, where it is necessary to have some knowledge of the field in which the photography is used.	Many photographers specialize in a particular type of photography, such as portrait, commercial, newspaper, industrial or medical photography. About one-third of all photographers are self-employed.
Planners	Planners prepare programs for the future development of communities. They take into account population trends, land use, public facilities, economic factors, and civic goals. Most planners work for city, county, or regional planning agencies. Some work for government agencies that deal with housing, transportation, or environmental protection. Others work for architectual, engineering, or construction companies. Planners also work for public interest organizations concerned with environmental protection and community development. Many planners do consulting work, either part time in addition to a regular job or as employees or owners of consulting firms.	Planners need analytical and abstract reasoning abilities above all. They need to be creative and resourceful in developing possible solutions to complex problems, and must have drive, tact, and persuasive and administrative skills in order to get their ideas across. A master's degree in urban or regional planning is usually required for a job in this field. However, people with bachelor's degrees in city planning, architecture, or engineering also qualify. Most graduate programs in urban planning require 2 or 3 years of study in addition to the 4-year undergraduate college degree. Graduate students gain practical experience through workshops, laboratories, and summer or part-time employment in a planning office.	In large organizations, planners specialize in areas such as housing or economics, while in small offices they must work in several different areas.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
COMMUNICATIONS OCCUPATIONS			
Advertising Workers	There are both creative and sales jobs in advertising. Creative workers such as writers, artists, and designers develop and produce advertisements, while business and salesworkers handle the arrangements for broadcasting advertisements on radio and TV, publishing them in magazines or newspapers, mailing them directly, or posting them on billboards. Advertising workers are employed by different kinds of firms. Primarily, they work for advertising agencies. But they also work in the advertising departments of manufacturing firms, retail stores, and banks. Some work for printers, art studios, letter shops, and similar businesses. Most of those employed by advertising agencies work in New York City, Chicago, or Los Angeles.	Advertising copywriters must have a flair for writing, imagination, salesmanship, and an understanding of people. A sense of the dramatic and the vision to see the effect of ideas are also important qualities. Account executives, whose job it is to create ad campaigns for clients, need writing skills and imagination too. In addition, they must be friendly, outgoing, and very good at communicating with others and selling their ideas. Most employers prefer to hire college graduates. A liberal arts degree usually provides good preparation for a job in this field, but work experience and creativity may be more important than educational background. Experience selling ads for school publications or radio stations can be a help in looking for a job.	Among the jobs in this field are those of advertising manager, account executive, research director, advertising copywriter, artist, layout worker, media director, and production manager. People in advertising work under great pressure to do the best job in the shortest period of time. Often they work long or odd hours to meet deadlines.
Interpreters	The largest concentration of full-time interpreters in the United States is at the United Nations in New York. Other international organizations that employ regular staff interpreters include the Organization of American States, the International Monetary Fund, the Pan American Health Organization, and the World Bank. All are situated in Washington, D.C. There also are jobs for freelance interpreters, many of whom serve as escort interpreters for foreign visitors to the United States. Other freelance interpreters work at international conferences, or work for business firms.	People interested in becoming interpreters should be articulate speakers and have good hearing. The exacting nature of this profession requires quickness, alertness, and a constant attention to accuracy. Good sense, honesty, tact, and discretion are also important. A university education usually is essential. A complete command of at least 2 languages generally is required. Interpreters who work at the United Nations must know at least 3 of the 6 official U.N. languages.	Interpreters make up a very small occupational group in the United States, and competition for interpreting jobs is great.

Performing Arts, Design, and Communications Occupations

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Newspaper Reporters	Reporters work for big city daily newspapers, for suburban community or small town weekly papers, and for press services. Reporters work in cities and towns of all sizes.	Important personal characteristics for newspaper reporters include curiosity, persistence, a "nose for news," initiative, resourcefulness, an accurate memory, and physical stamina. Most newspapers consider only applicants who have a college education, preferably with a degree in journalism or some other liberal arts area. Graduate work is increasingly important.	Although the majority of newspapers are in medium-sized towns, most reporters work in cities, since big city dailies employ many reporters whereas a small town paper generally employs only a few. Newspaper reporters generally have a busy daily schedule and may often have to work under pressure to meet deadlines.
Public Relations Workers	Public relations workers plan activities and create programs to promote a favorable public image of their client. Writing is an important aspect of the work. They write and edit articles, speeches, reports, pamphlets, and press releases. Public relations workers have jobs with business and industrial firms, insurance companies, transportation companies, public utilities, hospitals, colleges and universities, nonprofit organizations, and government agencies. Many work for public relations firms, which are most numerous in New York City, Los Angeles, Chicago, and Washington, D.C.	Public relations workers need writing ability, imagination, an outgoing personality, initiative, and drive. They must be fluent in conversation, effective public speakers, and persuasive. They should have the enthusiasm to motivate others. A college education with public relations experience is excellent preparation. Appropriate majors include public relations, journalism, liberal arts, and business. Experience writing for a school publication or for a radio or TV station can be helpful.	Public relations workers often have to work overtime on a project. Occasionally they travel on business.

Occupation	*Nature and Places of Work*	*Training and Qualifications*	*Other Information*
Radio and Television Announcers	Radio and television broadcasting stations all over the country employ announcers. The average commercial radio or television station employs 4 to 6 announcers, although larger stations employ 10 or more. In addition to staff announcers, several thousand freelance announcers sell their services for individual assignments to networks and stations, or to advertising agencies and other independent producers.	Announcers must have a pleasant and well-controlled voice, a good sense of timing, correct English usage, and excellent pronunciation as well as an attractive personality. There are no fixed requirements for entering this field. A college liberal arts education provides an excellent background for an announcer, and many universities offer courses in the broadcasting field. A number of private broadcasting schools offer training in announcing also.	Most radio announcer act as disc jockeys. Announcers employed by television stations and large radio stations usually specialize in particular kinds of announcing, such as sports, news, or weather. Announcers frequently participate in community activities.
Technical Writers	Many technical writers work for electronics, aviation, aerospace, ordnance, chemical, pharmaceutical, and computer firms. Others work for energy or communications firms. Research laboratories also employ technical writers. Some technical writers hold writing and editing jobs with business and trade publications, professional journals in engineering, medicine, physics, chemistry, and other sciences; and publishers of textbooks and scientific and technical literature. Established technical writers sometimes work on a freelance basis or open their own agencies or consulting firms.	Technical writers need writing skills and technical expertise above all. They also should be intellectually curious and able to think logically. They must be accurate in their work. They should be able to work well with others as part of a team. A college degree is important, and should include courses in a technical area such as science, engineering, medicine, business, or agriculture as well as writing, editing, and publication production.	Technical writers sometimes work under considerable pressure, working overtime to meet publication deadlines. Employers often promote technicians or research assistants to writing and editing jobs. Technical writers have a place in the information industry. Commercial firms employ technical information specialists to collect, process, and manage the information stored in computerized data bases. Technical information centers run by major industrial firms and research laboratories employ information specialists for the same purpose.

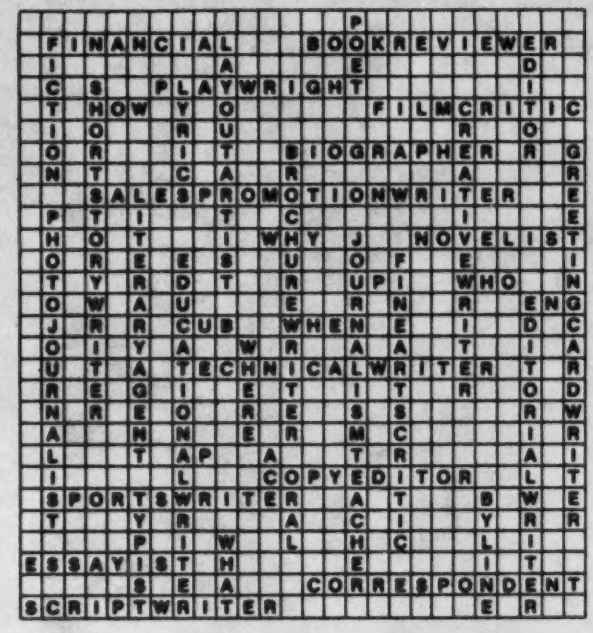


Newspaper reporters must be able to work under pressure

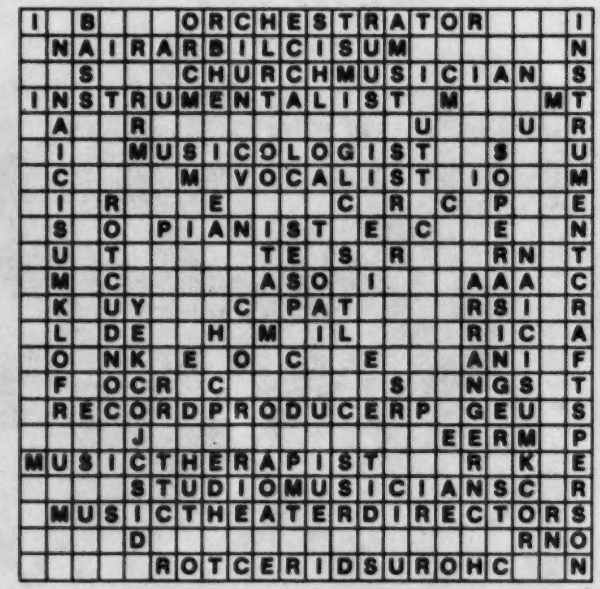
Answers to Related Occupations

ARCHITECT

1. b, 2. g, 3. d, 4. f, 5. h, 6. a, 7. c, 8. e.



STREET MUSICIAN



Answers to math problems

ARCHITECT

2000 sq ft.; 4 ft. x 5 ft. x 10 ft., 5 ft. x 5 ft. x 8 ft., 10 ft. x 10 ft. x 2 ft.; $15,000.

Bureau of Labor Statistics
Regional Offices

Region I
1603 JFK Federal Building
Government Center
Boston, Mass. 02203
Phone: (617) 223-6761

Region II
Suite 3400
1515 Broadway
New York, N.Y. 10036
Phone: (212) 944-3121

Region III
3535 Market Street
P.O. Box 13309
Philadelphia, Pa. 19101
Phone: (215) 596-1154

Region IV
1371 Peachtree Street, N.E.
Atlanta, Ga. 30309
Phone: (404) 881-4418

Region V
9th Floor
Federal Office Building
230 S. Dearborn Street
Chicago, Ill. 60604
Phone: (312) 353-1880

Region VI
Second Floor
555 Griffin Square Building
Dallas, Tex. 75202
Phone: (214) 767-6971

Regions VII and VIII
911 Walnut Street
Kansas City, Mo. 64106
Phone: (816) 374-2481

Regions IX and X
450 Golden Gate Avenue
Box 36017
San Francisco, Calif. 94102
Phone: (415) 556-4678